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ABSTRACTS

FIBERS A

ENTROPY STRESS STUDY OF VARIOUS TEXTILE FIBERS. S. L. Dart (Claremont Men's College). Textile Research J. 30: 372-380 (May 1960). (2682)

A stress-strain study has been made of various fibers to determine their entropy force behavior at room temperature. The relative importance of the entropy and internal energy forces is shown with some illustrations of the use of these quantities in understanding the fine structure of polymers. Details are presented to show the effects of extension and godet stretch on some samples. Diagr, graphs, 15 refs.

Natural fibers A1

COMPRESSIONAL BEHAVIOR OF TEXTILE FIBERS. S. Backer (Mass. Inst. Technol.). (Letter to the editor). Textile Research J. 30: 405-407 (May 1960). (2683)

A brief report on some results in measurement of axial compressive behavior of textile fibers is presented, and the relationship of compressional behavior to tensile behavior is discussed.

COMPRESSIONAL BEHAVIOR OF TEXTILE FIBERS. J. B. Miles (Chemstrand Research Center). (Letter to the editor). Textile Research J. 30: 408-409 (May 1960). (2684)

The striking differences between the tensile and compressive behavior of oriented nylon indicate that the bending behavior of oriented fibers in general may not be predictable from measurements of the tensile behavior alone.

SUPERCONTRACTING AND SETTING BEHAVIOR OF MODIFIED WOOL FIBERS. A. R. Haly and M. Feughelman (Wool Research Labs., Australia). Textile Research J. 30: 365-372 (May 1960). (2685)

The effects on supercontraction and set of ultraviolet irradiation and treatments intended to produce modification either at disulfide links or at tyrosine residues are reported. Ultraviolet irradiation of wool fibers increases their rates of supercontraction in unbuffered LiBr solutions and of setting in boiling water. Treatment with thioglycollic acid or peracetic acid also increases the rates of supercontraction and setting. Iodination or reaction with the Van Slyke reagent reduces the rates. There is little or no loss of tyrosine, and little loss of cystine in the irradiation time which gives the maximum effect on rate of supercontraction. Rate of supercontraction, rate of setting, and second-order transition temperature are closely related properties, as are equilibrium contraction, maximum set, and remanent stress. Graphs, tables, 34 refs.

DIFFUSION OF WATER INTO A DRY KERATIN FIBER. M. Feughelman and M. S. M. Robinson (CSIRO Wool Research Labs., Australia). (Letter to the editor). J. Appl. Polymer Sci. 1: 371-372 (May/June 1959). (2686)

ELECTRICAL CONDUCTION IN KERATIN. J. E. Algie, J. G. Downes, and B. H. Mackay (C.S.I.R.O. Wool Research Labs.). Textile Research J. 30: 432-434 (June 1960). (2687)

The increase in electrical conductivity of wool fibers after the application of an abrupt change of the relative humidity from 0 → 90% rh has been examined as a function of time. A comparison of these results with regain vs time, for the same experimental conditions, indicates that the water inside a fiber is not initially in a state which facilitates conduction. It is proposed that the slow rise of conductivity is due to the formation of a hydrogen bonded network which allows the passage of protons under the influence of the applied electric field. Graphs, 14 refs.

PROCESSING RAMIE ON MILL EQUIPMENT. J. L. Taylor and A. M. Herron (Ga. Inst. Technol.). Textile Inds. 124: 97-103 (June 1960). (2688)

The specific objectives of this investigation were: (1) determination of the effect of selected softeners or lubricants on the processing efficiency of selected staple lengths of ramie; (2) determination of the most practical methods of separating degummed staple ramie fibers; (3) determination of the finest yarns (and their construction) which can be spun satisfactorily from selected staple lengths of ramie fiber on standard textile equipment; and (4) determination of the staple lengths of ramie which can be satisfactorily processed into selected yarn numbers on standard textile equipment. Tables.

X-RAY STUDY OF ACETYLATED JUTE. S. C. Roy (Indian Jute Mills Assoc. Research Inst.). Textile Research J. 30: 451-456 (June 1960). (2689)

X-ray results for progressively acetylated jute fibers are described. The diffraction pattern of partially acetylated jute has certain features in common with that of a similarly treated pure cellulose fiber such as ramie or cotton, but the intense equatorial reflection characteristic of the acetyl cellulose appears to be absent in it. At highest acetyl content, the x-ray photograph of jute is closely similar to that of cellulose triacetate I, and the transformation to the new lattice appears as complete as in a pure cellulose fiber. The two large spacing equatorial reflections A_X and A_Y show improved sharpness and intensity as well as increased spacing on the partially acetylated jute diagram but are absent in the fully substituted one. The results are discussed in the light of the structure of jute. Photomicrographs, tables, 14 refs.

UPGRADING BAST FIBERS IN MANUFACTURE. S. A. G. Caldwell. Textile Mfr. 86: 186-188 (May 1960). (2690)

Bast fibers in the raw state can be subjected to mechanical softening treatment to extend the spinning range, or they can be treated chemically prior to or at some stage in manufacture to achieve similar results. Photo, diagrs.

TEXTILE PRODUCTS IDENTIFICATION ACT: MEANING OF FIBER PROPERTIES OUTLINED BY FTC. Knitted Outerwear Times 29: 17, 19, 53 (June 13, 1960). (2691)

The properties which the various chemical fibers contribute to fabrics are outlined.

KINETIC STUDIES OF THE WOOL-WATER SYSTEM. PART 1. INFLUENCE OF WATER CONCENTRATION. I. C. Watt (C.S.I.R.O. Wool Research Labs.). Textile Research J. 30: 443-450 (June 1960). (2692)

Studies have been made of the sorption of water by wool fibers, after changes of the external water vapor pressure, by following the weight changes of the fibers. The sorption kinetics are dependent on the size of the concentration change and the initial regain of the wool. Graphs, table, 22 refs.

Manmade fibers A2

ORLON SAYELLE ACRYLIC FIBER. E. I. du Pont de Nemours & Co., Textile Fibers Dept., Wilmington, Del. May 1960. 19 p. Bull. NP-11. Free. (2693)

Orlon Sayelle has a permanent reversible crimp and crimp memory. Its properties and processing are described.

POLYOLEFINS: A NEW TEXTILE FIBER. F. Fourne (Von Kohorn Intern. Corp.). Silk Rayon Inds. India 3: 15-18 (Feb. 1960). (2694)

A review. Tables, 19 refs.

RAYON AND SYNTHETIC FIBERS OF JAPAN, 1960. Japan Chem. Fibres Assoc., No. 3, 3-chome, Nihonbashi-Muromachi, Chuo-ku, Tokyo, Japan. 1960. 60 p. Free. (2695)

This annual contains articles on Japanese manmade fibers (with fabric swatches), a table of the chemical properties of these fibers, articles on Japanese textile design, and a directory of manufacturers.

WORLD MANMADE FIBER SURVEY. Textile Organon 31: 89-112 (June 1960). (2696)

Annual survey of the world manmade fiber producing industry includes production statistics and a directory of producers' names.

PROPERTIES OF POLYNOSIC FIBER Z 54. P. Swillens. Rayonne et Fibres Synthet. 16, No. 2: 141-144 (1960). In French. Through BCIRA 40: 1474 (1960). (2697)

The structure of the fiber and its physico-chemical and physical properties are discussed.

POLYNOSIC FIBER Z 54. Soc. de la Viscose Suisse. Textil-Rundschau 15: 82-85 (1960). In German. Through BCIRA 40: 1475 (1960). (2698)

Physico-chemical and mechanical properties of the fiber, its behavior during spinning, weaving, knitting, dyeing, and finishing, and uses in pure form and in mixtures with natural and synthetic fibers are discussed.

WORLD DIRECTORY OF FIBERS AND YARNS. J. G. Muir. Courtaulds Ltd, Coventry, 1959. p. N i-xii, T i-xiv, P i-xiv, 1-85. Through BCIRA 40: 1467 (1960). (2699)

This loose-leaf compilation consists of an index of trade names of (manmade) fibers and yarns, an index of types (regenerated cellulose, cellulose ester, regenerated protein, synthetic polymer, miscellaneous), an index of producers and countries, and a directory arranged alphabetically by country listing manufacturers, fiber types, and named fibers, blends and bulked yarns.

FIBERS FROM ADDITION POLYMERS. H. Hopff and G. Greber. Ciba Rev. 12, No. 137: 2-26 (Apr. 1960). (2700)

Addition polymerization, p. 2-8; Fibers based on polyvinyl chloride, p. 9-16; Polyacrylonitrile fibers, p. 17-22; Fibers from polyolefins and polyvinyl alcohol, p. 23-26. Photos, photomicrographs, diagrs, graphs.

FINDING THE FACTS ON MANMADE FIBERS. PART 1. M. Dean (Brit. Rayon Research Assoc.). Skinner's Silk & Rayon Record 34: 564-565 (June 1960). (2701)

Literature sources for manmade fibers are surveyed. 42 refs.

MOISTURE AND VISCOSE RAYON. J. G. Wiegerink (Am. Viscose Corp.). Textile World 110: 40-42 (June 1960). (2702)

Basic data on moisture adsorption and desorption of viscose fibers in equilibrium with air at different relative humidities and at temperatures from 24° C to 100° C are given. The practical importance of these data in manufacturing is discussed. Graphs.

YARN PRODUCTION B

MODERN QUALITY CONTROL IN THE COTTON SPINNING INDUSTRY. L. Hamor (Glendale Spinning Mills Ltd). Can. Textile J. 77: 54-57 (May 13, 1960). (2703)

The principle of the closed loop circuit in quality control and the use of sampling schedules and their interpretation are explained. Tables, 3 refs.

FIBER ADDITIVES. Textile Inds. 124: 71-72 (June 1960). (2704)

Results of a survey of mills using colloidal silica compounds as fiber additives indicate that, on the whole: additives bring about an increase in fiber friction; increase web, sliver, roving, and yarn strength; bring about a decrease in fly and certain other wastes; decrease spinning ends down; and preserve or improve uniformity.

OILS AND OILING IN WOOL PROCESSING. H. V. Terry (Price's (Bromborough) Ltd). J. Textile Inst. 51: P230-P237 (May 1960). (2705)

The requirements and uses of wool lubricants are discussed and the main types (e.g. oleines, blended oils, recovered oils, mineral-based oils, and synthetic lubricants) are described.

SPINNING OF ARTIFICIAL AND SYNTHETIC FIBERS ON COTTON EQUIPMENT. Rayonne et Fibres Synthet. 16, No. 1: 25-38; No. 2: 145-154 (1960). In French. Through BCIRA 40: 1492 (1960). (2706)

Properties of various artificial and synthetic fibers, the effects of fiber length and fineness on the strength, spinnability and twist of yarns, conditioning and preparation of the material, blending of textile fibers and its purpose, and methods and equipment used are discussed. Reference is also made to the necessity of applying fugitive dyes for the identification of individual blend components.

FRUITS OF SPINNING MODERNIZATION. R. E. Pomeranz (Roberts Co.). Skinner's Silk & Rayon Record 34: 432-433 (May 1960). (2707)

The author presents a preferred order of importance of the elements to be considered in spinning modernization. Results achieved by modernization in manufacturing print cloth warp yarns, sheeting warp yarns, and carded sales yarns are included.

MANUFACTURING MALPRACTICES (DON'T ALWAYS BLAME THE DYE). H. Thuemmel (Nat. Aniline Div.). Dyestuffs 43: 171-175 (June 1960). (2708)

Malpractices in worsted or woolen goods manufacture that contribute to poor quality.

PRODUCTION OF FINE COUNT SPUN NYLON YARNS BY STRETCH-BREAKING ON THE SEYDEL SYSTEM. Textile Development Dept., Brit. Nylon Spinners Ltd. Advance report no. 27. May 1960. 11 p. (2709)

Experience with stretch-breaking 100,000 denier (1-1/2 d.p.f.) nylon tow on a Seydel machine, and of equipment used to convert the Seydel sliver into yarn. Diagrs, photomicrographs.

Carding and combing B2

DON'T STRIP BY THE CLOCK! C. J. Williams. Textile Inds. 124: 85-87 (June 1960). (2710)

Since a complete stripping of card wire produces profound though temporary changes in carding conditions, certain precautions should be taken. These and the determination of stripping intervals according to blend type, stock conditions, and roving poundage are discussed. Photos.

ARRESTADRIVE CARD GRINDING MECHANISM. Beswick & Haworth Ltd. Textile Weekly 60 (1): 1403-1406 (June 3, 1960). (2711)

The principle of the Arrestadrive is to bring the card driving belt to rest while the shaft is still revolving, thus rendering the stopping of the line-shaft unnecessary but at the same time allowing the belt to be handled with safety. Photos.

MODERN LAP PREPARATION AND COMBING. F. Greenhalgh (A. E. Aspinall Ltd). Textile Weekly 60 (1): 1447-1448, 1471 (June 10, 1960). (2712)

Changes in lap construction with the Even-Draft drawing frame and Whitin Super Lap machine and the effect on the combing operation are discussed. Photo, diagrs.

Drawing and roving B3

EFFECT OF SPINNING ADDITIVES ON ROLLER SLIP AT THE DRAWING FRAME. S. Y. Nanal and G. K. Roy (V. J. Tech. Inst., Bombay). Indian Textile J. 70: 308-310, 322 (Mar. 1960). (2713)

Results of some experiments on the effect of (1) colloidal silica and (2) a petroleum base cotton spraying oil on roller slip at the drawing frame are presented. Graph, 2 refs.

SACO-LOWELL/USTER VERSAMATIC ADC DRAW-FRAME WITH AUTOMATIC DRAFT CONTROL. L. Visscher. Tex 19, No. 2: 64-68 (1960). In Dutch. Through BCIRA 40: 1489 (1960). (2714)

The drafting system of the Versamatic ADC drawframe is described and compared with existing drafting systems. The velocity of the calender rollers is also automatically controlled according to the velocity of the front roller, so that a minimum constant tensioning draft is applied to the lap between front roller and calender rollers. Use of the automatic draft control in the spinning mill is discussed, and spinning results on four cotton varieties are tabulated.

ROVEMATIC ROVING MACHINE. Saco-Lowell Shops. Modern Textiles Mag. 41: 40 (June 1960). (2715)

The Rovematic frame has a telescoping spindle design which does away with the traversing carriage, the long reversing shafts, and other carriage-lifter mechanisms and counterbalance weights. The flyer-spindle arrangement permits doffing without removing the flyer. Photos.

Spinning, winding, twisting B4

TWIST IN RING SPINNING AND DOUBLING. PART 1. SNAIL WIRE. K. Kanai, H. Kani, H. Kamogawa, and T. Sakata. J. Textile Machy. Soc. Japan 13, No. 2: 99-103 (1960). In Japanese (English summary). Through BCIRA 40: 1494 (1960). (2716)

The twist distribution in yarn between the roller nip and the package in ring doubling has been studied by high-speed photography. The twist in the yarn between the roller nip and the traveler is greater than that of the yarn on the package. The twist in the yarn above the snail wire (thread guide) is about 15% greater than in that under.

AUTOMATIC CORRECTION OF YARN COUNT ON SPINNING MACHINES. P. Popescu. Industria Textila 11, No. 2: 44-48 (1960). In Rumanian. Through BCIRA 40: 1666 (1960). (2717)

A mechanism is described, by means of which it is possible to correct the metric count of the yarn during operation of the spinning machine. The mechanism is driven by means of electrical wires from a central control board arranged in the testing laboratory of the plant. The mechanism can be fitted on ring spinning machines or drawframes, i.e. on machines where the draft wheels are most frequently changed.

Yarns B5

THERMODYNAMIC DISCUSSION ON THE STRESS RELAXATION OF 6-NYLON FILAMENT YARN HEATED UNDER FIXED EXTENSIONS. I. Tsujimoto and N. Motoji. J. Textile Machy. Soc. Japan 13, No. 2: 104-108 (1960). In Japanese (English summary). Through BCIRA 40: 1585 (1960). (2718)

Stress-temperature behavior was examined on the assumption that the thermodynamic relation of rubber is applicable. Tensile force can be separated into energy and entropy components. Heating temperature has no influence on entropy change. The entropy component increases as the temperature or degree of extension increases; it is larger than the total force. The energy component is negative, is little influenced by temperature change, but decreases as the degree of extension increases.

DYNAMIC DISTRIBUTION OF STRAIN IN TEXTILE MATERIALS UNDER HIGH-SPEED IMPACT. PART 1. EXPERIMENTAL METHODS AND PRELIMINARY RESULTS ON SINGLE YARNS. D. R. Petterson, G. M. Stewart, F. A. Odell, and R. C. Maheux (U.S. Army Chem. Warfare Labs.). Textile Research J. 30: 411-421 (June 1960). (2719)

The basic objective of this series of investigations is a study of the dynamics of energy absorption in materials used for personnel body armor. To present a useful statement of the dynamic requirements of a body armor material, the various modes of energy absorption must be determined. Knowledge of the majority of these modes of energy absorption requires information concerning the local strain in the yarns of the fabric and some relationship between the stress and strain in both yarns and fabric under this extreme dynamic loading. Information on the behavior of nylon at the rates of straining produced by these high-speed impacts is presented. Photo, diagrs, graphs, table, 23 refs.

DYNAMIC DISTRIBUTION OF STRAIN IN TEXTILE MATERIALS UNDER HIGH-SPEED IMPACT. PART 2 STRESS-STRAIN CURVES FROM STRAIN-POSITION DISTRIBUTIONS. D. R. Petterson and G. M. Stewart (U.S. Army Chem. Warfare Labs.). Textile Research J. 30: 422-431 (June 1960). (2720)

Employing data from Part 1 on instantaneous local strain distributions, this paper presents a preliminary mathematical treatment of the experimental data in an effort to determine a dynamic stress-strain relationship in nylon and Dacron yarns as the time to break approaches zero. Predictions are made about the probable behavior of other textile materials. Graphs, 32 refs.

PROPERTIES OF DACRON TYPE 52 YARN. E. I. du Pont de Nemours & Co., Textile Fibers Dept., Wilmington, Del. Apr. 1960. 7 p. Bull. D-121. Free. (2721)

Typical properties as well as the effects of moisture, heat, light, and chemicals on this yarn are presented.

PROGRESS REPORT ON COURTOLON YARNS FOR KNITTING. Courtaulds Ltd. Hosiery Trade J. 67: 96-99, 103 (May 1960). (2722)

The range of Courtolon resilient stretch nylon yarns available is noted, and examples of its knitting end-uses are reviewed. Photos.

SPUNIZE TEXTURED YARN. E. Stowell (Stowell & Co.). Textile Inds. 124: 91-92 (June 1960). (2723)

The Spunize method utilizes the stuffer-box technique in simultaneously crimping a large number of ends in warp form. This is followed by heat setting in an autoclave. And through using special attachments, the Spunize process is able to provide maximum bulk or, where needed, to control to an exact degree bulk for a particular end use application.

CRITICAL DEGREE OF TWIST IN MANMADE FILAMENTS. W. Frenzel and W. Kittelmann. Deut. Textiltech. 10, No. 2: 59-61 (1960). In German. Through BCIRA 40: 1496 (1960). (2724)

On the basis of literature data and the authors' own experiments, it is concluded that, contrary to what is found in staple-fiber yarns, there is no critical degree of twist in continuous-filament yarns. The strength increase in the yarns in the low-twist regions is probably due to variations in the properties of the elementary filaments. Reference is also made to the results obtained by S. Ploch (abstr. 3695/59) who studied the changes in the properties of filament yarns caused by the twist.

PATHWAYS OF CAPILLARY MIGRATION OF LIQUIDS IN TEXTILE ASSEMBLIES. F. W. Minor and A. M. Schwartz (Harris Research Labs.); L. C. Buckles and E. A. Wulkow (U.S. Army Chem. Warfare Labs.). Am. Dyestuff Reptr. 49: 419-424 (June 13, 1960). (2725)

It has been confirmed that the capillary migration of representative organic liquids within yarns follows the $s^2 = kt$ relationship derivable from the Washburn equation. This relationship is also followed when the liquids move by capillarity in each of the three mutually perpendicular directions within a typical woven fabric, namely, warpwise, fillingwise, and through the thickness. Photos, diagr, graphs, table, 3 refs.

HOT STRETCHING NYLON CORDS. W. S. Symes (Brit. Nylon Spinners Ltd). Textile Weekly 60 (1): 1451 (June 10, 1960). (2726)

Methods of hot stretching nylon tire cords and the effect on modulus are described.

HEAVY DENIER DRAWTWISTER. Dobson & Barlow Ltd. Textile Weekly 60 (1): 1452, 1454 (June 10, 1960). (2727)

The HDT1 drawtwister was developed especially for the heavier synthetic yarns, particularly tire cords. It is designed primarily for hot-stretching high tenacity yarns and is mechanically capable of producing drawn yarns of up to 2,000 denier. Mechanical and operational details are included. Photo.

FABRIC PRODUCTION C

Warping, slashing, yarn preparation C1

SIZEMASTER SIZE BOX. Cocker Mach. & Foundry Co. Textile Merc. 142: 649, 655 (May 13, 1960). (2728)

The Sizemaster is designed to give greater size penetration of high density filament warps and to control degrees of stretch within strict limits. Diagr, photo.

SIZING TRENDS WITH MANMADE FIBERS. A. Crummett (Brit. Rayon Research Assoc.). Textile Weekly 60 (1): 1222-1223 (May 13, 1960). (2729)

Improvements in machinery are briefly reviewed.

SIZING TRENDS WITH MANMADE FIBERS. A. Crummett (Brit. Rayon Research Assoc.). Textile Weekly 60 (1): 1291 (May 20, 1960). (2730)

Sizing agents for synthetic materials are discussed.

SIZING TRENDS WITH MANMADE FIBERS. A. Crummett (Brit. Rayon Research Assoc.). Textile Weekly 60 (1): 1338-1339 (May 27, 1960). (2731)

The advantages of cellulose ethers, starch ethers, and amylopectins over unmodified starch, methods of dealing with yarn hairiness, and sizes for blended yarns are discussed.

BULKED YARN HANK TECHNOLOGY. W. Schmidli (Croon & Lucke). Man-Made Textiles 37: 38-39 (May 1960). (2732)

THE NEW SOLVENT METHODS OF WOOL SCOURING. PART 1. H. Needham and W. Parkin. Wool Rev. 33: 29 (May 1960). (2733)

DIRECT AND SECTION WARPING OF COLORED STRIPES. J. Eichholzer (Benninger Eng. Co. Ltd). Textile Merc. 142: 690-693 (May 20, 1960). (2734)

The purpose of this paper is to explain where and when the two systems of direct or section warping should be employed for the manufacture of colored striped warps of spun yarn. The economics of the two systems are compared. Photos.

Weaving C2

ADJUSTABLE GAGE FOR CONTROLLING THE SETTING OF VARIOUS MECHANISMS ON LOOMS. F. Kormos. Industria Textila 11, No. 2: 62-63 (1960). In Rumanian. Through BCIRA 40: 1681 (1960). (2735)

AUTOMATIC WARP LETOFF MOTION T.V.V. J. Castain. Industrie Textile: 121-122 (Feb. 1960). In French. Through BCIRA 40: 1679 (1960). (2736)

The mechanism of the letoff motion, which can be installed at the side of the loom, is described and illustrated. It is claimed to eliminate weft bars due to irregular letoff of the beam.

THE LOOM THAT LOST ITS SHUTTLE. Draper Corp. Oilways 26: 1-6 (June 1960). (2737)

The story of the development of the Draper shuttleless loom. Photos, diagrs.

CROMPTON & KNOWLES' C-7 LOOM SERIES. Crompton & Knowles Corp. Can. Textile J. 77: 45-49 (May 27, 1960). (2738)

Details of the general construction and features of this series are covered. Photos.

GAGES IN DRAPER LOOM MAINTENANCE. PART 5. Textile Inds. 124: 89-90 (June 1960). (2739)

The alignment of aluminum lays, terry reeds, and the use of adjustable hand rails are discussed.

AL SINGLE SHUTTLE PIRN-CHANGING AUTOMATIC AND GPR 4 x 4 PICK-AT-WILL LOOMS. Butterworth & Dickinson Ltd. Textile Merc. 142: 644-645 (May 13, 1960). Textile Weekly 60 (1): 1207-1208 (May 13, 1960); 1283, 1293 (May 20, 1960). (2740)

The outstanding feature of the low cost AL loom is the Shirley negatively controlled letoff system. The GPR model includes a Loepfe photoelectric feeler which operates on the shuttle before it enters a left-hand side box. Other features are noted. Photos.

SCHMEING AUTOMATIC CIRCULAR BOX LOOM. Textile Merc. 142: 682 (May 20, 1960). (2741)

The loom has a 6-compartment circular box, and 4 of the shuttles are replenished automatically. The remaining 2 shuttles are available for hand-replenishment. A unique feature is an underpick motion with fixed picker. Photo.

LOOMFIXER AND HIS JOB. PART 19. W. Westbrook. Textile Bull. 86: 47-48 (June 1960). (2742)

The setting and maintenance of the side fork filling motion are explained. Diagrs.

SAURER AUTOMATIC LOOMS. Adolph Saurer Ltd. Can. Textile J. 77: 41-43 (May 27, 1960). (2743)

Basic facts and characteristics of the Saurer fully automatic 6 x 1 drop box loom type 100W, single shuttle automatic weaving loom type 100W, single shuttle automatic weaving loom type 100W, and single shuttle automatic terry towel loom type 100W. Photos.

USE OF STATISTICAL CONTROL IN THE WEAVING MILL. MULTI-MOMENT [SNAP-READING] METHOD. H. Siegel. Deut. Textiltech. 10, No. 2: 65-68 (1960). In German. Through BCIRA 40: 1639 (1960). (2744)

The method is described, and its importance, the number of required observations, and its uses, especially in determining the cause of loom stoppages, are discussed.

TEXNOVO NARROW FABRIC SHUTTLELESS LOOMS. Skinner's Silk & Rayon Record 34: 566-567 (June 1960). (2745)

Texnovo build two types of shuttleless loom, operating respectively under the bobbin and needle-weaving principles. The features of these classes of looms are described. Photos.

Knitting C3

PREVENTING LOOP-OUTS IN KNITTING LONG STAPLE YARNS. W. Shewmake. Textile Inds. 124: 133-134 (June 1960). (2746)

The cause and prevention of loop-outs are briefly discussed. Diagrs.

FUNDAMENTALS OF RASCHEL KNITTING. A. Reisfeld, C. Rotenstein, D. F. Paling, and J. B. Lancashire. Nat. Knitted Outerwear Assoc., 386 Park Ave. South, New York 16, N.Y. 1958. 50 p. $3.00. (2747)

LACE MANUFACTURE ON RASCHEL MACHINES. C. Rotenstein. Nat. Knitted Outerwear Assoc., 386 Park Ave. South, New York 16, N.Y. 1954. 48 p. $4.00. (2748)

Contents: Introduction, p. 7-12; Relation of lace structure to knitting elements, p. 13-20; Ground structures suitable for raschel laces, p. 21-29; How to design, plan, and construct raschel laces, p. 30-37; Calculating cost and production data, p. 38-40; How to knit selvages and draw threads, p. 41-48.

MANUFACTURE OF RASCHEL WOOL AND COTTON OUTERWEAR. C. Rotenstein. Nat. Knitted Outerwear Assoc., 386 Park Ave. South, New York 16, N.Y. 1955. 138 p. $5.00. (2749)

CONTROL OF DEFECTS IN RASCHEL FABRICS. A. Reisfeld. Nat. Knitted Outerwear Assoc., 386 Park Ave. South, New York 16, N. Y. 1955. 58 p. $4.00. (2750)

KNITTING SWEATERS OF ORLON ACRYLIC FIBER. E. I. du Pont de Nemours & Co., Textile Fibers Dept., Wilmington, Del. May 1960. Bull. OR-102. Free. (2751)

HOW TO PRODUCE LACE EFFECTS IN SWEATER MANUFACTURE. J. B. Lancashire. Knitted Outerwear Times 29: 5, 7, 11 (June 27, 1960). (2752)

DOUBLE JERSEY MACHINES. Man-Made Textiles 37: 56, 58 (May 1960). (2753)

Circular latch-needle machines for double jersey production built by A. Kirkland & Co. Ltd, G. Stibbe & Co. Ltd, and Wildt Mellor Bromley Ltd, are described. Photos.

DEVICE CHECKS ACCURACY OF TRICOT MACHINE SETTINGS. Brit. Rayon Research Assoc. Knitted Outerwear Times 29: 7 (June 20, 1960). (2754)

The Projectoset helps prevent filamentation of yarn, broken warp ends, and damage to needles caused by incorrect setting of the knitting elements. It enables an accurate record to be kept of the settings of knitting elements on warp knitting machinery.

KOKETT WARP KNITTING UNIT. VEB Wirkmaschinenbau. Skinner's Silk & Rayon Record 34: 434, 436 (May 1960). (2755)

Features of the machine include: an operating speed of 1,000-1,200 courses per min; wide patterning possibilities; and vibration and noise reduced to an absolute minimum. Photos.

SETTING OF KNITTING ELEMENTS ON WARP KNITTING MACHINES. Textile Weekly 60 (1): 1278 (May 20, 1960). (2756)

The operation of the Manra Projectoset is explained. Photo, diagr.

WARP KNITTING MACHINERY MAINTENANCE. Textile Weekly 60 (1): 1279-1280 (May 20, 1960). (2757)

DOUBLE JERSEY STRUCTURES. Man-Made Textiles 37: 54-55 (May 1960). (2758)

The phrase double jersey actually covers a wide variety of fabric constructions, each with individual characteristics of texture, appearance, handle, and dimensional stability, produced on two sets of needles. Their structures are described. Photo, diagrs.

LACE ON MODERN RASCHEL MACHINES. PART 3. B. Wheatley (Nottingham & District Tech. Coll.). Man-Made Textiles 37: 51-53 (May 1960). (2759)

The advantages of the raschel machine for lace production, and its mechanisms, are discussed. The five principal motions required are described in detail. Photos, diagrs.

Fabrics C4

CHEMISTRY AND APPLICATION OF RUG-BACKING COMPOUNDS. PART 5. GETTING A TOP-NOTCH FINISHED BACKING. G. Brawner. Textile World 110: 78-79 (June 1960). (2760)

The causes and prevention of deterioration of backing compounds are discussed. Test methods are outlined.

AUTOMATIC CARPET SLITTING AND TRIMMING MACHINE. Brit. Tufting Machy. Ltd. Skinner's Silk & Rayon Record 34: 581 (June 1960). (2761)

MANMADE FIBERS IN CARPETS. PART 1. SPECIAL REQUIREMENTS OF THE TUFTED TRADE. H. Sneyd (Courtaulds Ltd). Textile Merc. 142: 784-786, 796 (June 10, 1960). (2762)

The use of manmade fibers (particularly viscose rayon) in tufted carpets, fiber and backing fabric requirements, and the processing of pile yarns are discussed.

BACKGROUND TO TUFTING. PART 2. H. Sneyd (Courtaulds Ltd). Skinner's Silk & Rayon Record 34: 493, 495-498 (May 1960). (2763)

Methods of achieving patterning in tufted carpets, types of backing and their application, fiber types, and yarn preparation are reviewed.

BACKGROUND TO TUFTING. PART 3. H. Sneyd (Courtaulds Ltd). Skinner's Silk & Rayon Record 34: 603-607 (June 1960). (2764)

The final section of a three-part review of the fundamentals of tufted carpet production. Yarn production is discussed.

NEW PROCESS CONTROL FOR MAKING POLYETHER URETHANE FOAMS. H. G. Scholten, J. G. Schuhmann, and R. E. Tenhoor (Dow Chem. Co.). Ind. Eng. Chem. 52: 613 (July 1960). (2765)

DESIGN IN WOVEN STRUCTURE. PART 93. FIGURING WITH EXTRA THREADS. D. C. Snowden. Wool Rev. 33: 35 (May 1960). (2766)

FIBER LOCKER FOR NONWOVEN FABRICS. James Hunter Mach. Co. Skinner's Silk & Rayon Record 34: 563 (June 1960). (2767)

The Fiber Locker is a laboratory machine designed to explore the full potentialities of mechanically felted nonwoven materials. The needle-board used on this small machine is an exact reproduction of the needle-board of a large machine with the same needle pattern and the same number of needles per unit area. Photos.

CORRELATION OF INSTRON AND ELMENDORF TEARING STRENGTH RESULTS. J. F. Krasny and D. C. Borton (Harris Research Labs.). (Letter to the editor). Textile Research J. 30: 400-401 (May 1960). (2768)

In lower tearing strength regions, the Elmendorf results correlated well with the Instron tongue tear results; at higher tearing strength levels, a distinct effect of weave appeared, with an opener weave rating relatively high and a somewhat tighter weave relatively low on the Elmendorf scale. Graph, 8 refs.

MIXED POLYESTER FABRICS FOR SUITINGS FROM BINARY AND TERNARY FIBER BLENDS. Ingenieurschule für Textilindustrie Forst and VEB Ostdeutsche Tuchfabrik Forst. Deut. Textiltech. 10, No. 2: 69-74 (1960). In German. Through BCIRA 40: 1591 (1960). (2769)

Experiments carried out on various Lanon/wool, Lanon/viscose rayon, and Lanon/wool/viscose rayon blends (spinning, weaving, and finishing) are reported. The fabrics produced were tested for weight, tensile strength in warp and weft direction, elongation of warp and weft, crease-recovery in warp and weft, abrasion resistance, and residual shrinkage in warp and weft direction. The results are discussed.

ACRYLIC WORK CLOTHES FOR INDUSTRY. H. Lovell. Skinner's Silk & Rayon Record 34: 442-443 (May 1960). (2770)

The main virtue of Courtelle in the industrial field is its chemical resistance. Other desirable properties are good strength both wet and dry, good abrasion resistance, low water uptake, quick drying after washing, good washing stability, freedom from attack by mildew or moths, and good rot resistance. Details of the effect on strength and appearance of the fiber when treated for 24 hrs by some 50 chemicals are tabulated.

DESIGNING DRESSWEAR CONTAINING DU PONT FIBERS. E. I. du Pont de Nemours & Co., Textile Fibers Dept., Wilmington, Del. June 1960. 6 p. Bull. X-121. Free. (2771)

SEWING OF JERSEY FABRICS CONTAINING ORLON. E. I. du Pont de Nemours & Co., Textile Fibers Dept., Wilmington, Del. June 1960. 1 p. Bull. OR-104 (replaces Bull. OR-18). Free. (2772)

DESIGNING OF PILE FABRICS. CHAPTER 7. UNCOATED UPHOLSTERY. CHAPTER 8. AUTOMOTIVE FABRICS. E. B. Berry. Textile Bull. 86: 49-50 (June 1960). (2773)

The weave of uncoated upholstery and automotive fabrics is explained and illustrated. A flow chart for their finishing is included. Diagrs.

COMPARISON OF SOME PHYSICAL PROPERTIES OF 80 x 80 PRINT CLOTH PRODUCED FROM THREE COTTONS DIFFERING PRIMARILY IN FLAT BUNDLE STRENGTH. J. E. Sands, L. A. Fiori, and J. J. Brown (So. Regional Research Lab.). Textile Research J. 30: 389-392 (May 1960). (2774)

The strongest-fibered cotton produced the strongest fabrics in the warp direction in the gray, bleached, and bleached and dyed states; however, in the filling direction this relationship did not hold for the bleached and bleached and dyed states. Elongation at break of fabrics was apparently influenced more by mechanical treatment during chemical processing than by fiber properties. Tearing resistance of the fabrics appeared to be correlated with cotton fiber strength at zero gage. There appeared to be no relationship between cotton fiber strength and fabric abrasion resistance except in the filling direction in the gray state. Graphs, tables, 8 refs.

FACTORS AFFECTING PREPARATION OF GLASS PAPER. C. E. Huckaba and J. C. Geddes, Jr. (Univ. of Fla.). Ind. Eng. Chem. 52: 569-574 (July 1960). (2775)

Graphs, tables, 12 refs.

COURLENE X3 FILTER FABRICS. H. J. Lovell. Skinner's Silk & Rayon Record 34: 554-555 (June 1960). (2776)

Results of trials carried out on the use of Courlene X3 for sewage filtration are summarized. Photos.

AVOIDING DEFECTS IN WOVEN FILAMENT FABRICS. A. Chadwick (Brit. Rayon Research Assoc.). Textile Weekly 60 (1): 1225 (May 13, 1960). (2777)

The use of sequence winding to minimize weftway bars and panels is explained.

AVOIDING DEFECTS IN WOVEN FILAMENT FABRICS. A. Chadwick (Brit. Rayon Research Assoc.). Textile Weekly 60 (1): 1340, 1343 (May 27, 1960). (2778)

Defects due to weaving conditions and methods of avoiding faults due to takeup, shuttles, raceboard, reeds, and heddles are discussed.

AVOIDING DEFECTS IN WOVEN FILAMENT FABRICS. A. Chadwick (Brit. Rayon Research Assoc.). Textile Weekly 60 (1): 1399-1400 (June 3, 1960). (2779)

The causes and effects of variations in warp and weft tension are discussed.

BEHAVIOR OF SAMPLE PLEATED STRIPS OF WOOL FABRIC IN AN EXTENSOMETER. PART 2. MODIFICATIONS DUE TO PLEAT CURVATURE AND OTHER SECOND ORDER EFFECTS. H. W. Holdaway (C.S.I.R.O. Wool Research Labs.). Textile Research J. 30: 456-461 (June 1960). (2780)

A simple theoretical model previously considered was inadequate in some respects to provide a complete account of the observed elastomechanical behavior of a pleat when extended. Factors now included are the radius of curvature at the pleat and the variation in fabric stiffness as a function of tension. The use of additional parameters to take account of these effects permits a very good description of the observed behavior. Graphs, table, 2 refs.

SELF-SMOOTHING FABRICS: FIBER AND FABRIC RECOVERY. J. T. Marsh. Textile Mfr. 86: 202-204, 207 (May 1960). (2781)

The relationship of wet and dry crease recovery to fiber structure and properties is explained. Photomicrographs, diagrs, tables.

FINISHING D

LINT LIBERATION FROM COTTON FABRIC DURING LAUNDERING AND DRYING. R. C. Davis and D. C. Wood (Whirlpool Corp.). Am. Dyestuff Reptr. 49: 425-429 (June 13, 1960). (2782)

Lint liberation and cupriethylene diamine fluidity studies have been made of cotton fabrics and lints during various stages of home laundering. Results indicate that lint liberation is not solely a function of mechanical action, but is greatly affected by the addition of oxidizing bleaches. Chlorine-containing bleaches increase lint liberation to a greater extent than do peroxygen compounds. Some correlation between lint liberation and cupriethylene fluidities are discussed. Microscopic studies of cotton lints have been made. These studies showed that immature cotton fibers constitute in excess of 90% of lint liberated during early phases of laundering. Photomicrograph, graphs, table, 4 refs.

POLYAMIDE FIBERS. SVF Fachorgan Textilveredlung 15, No. 2: 74-157 (1960). In German. Through BCIRA 40: 1691 (1960). (2783)

This special number, the second of this series, deals with dyeing and finishing of polyamide fibers. Among the contributions are the following articles: Dyeing of Rilsan, p. 75-78; Dyeing of wool/polyamide fiber blends, by H. Stern and R. Gygax, p. 78-84; Lyogen P, an assistant for level dyeing of streaky polyamide articles with acid dyes, p. 85-87; Dyeing of crimped polyamide yarn, p. 88-90; Dyeing of elastic fabrics from crimped nylon/wool yarns, by W. Staub, p. 91-92; Dyeing of the polyamide fiber Rilsan (nylon 11), by H. Stern and R. Gygax, p. 92-94; Dyeing and finishing of elastic ski-fabric from crimped polyamide yarn and wool with Palatin Fast and Neopalatin dyes, by H. Heinrich, p. 95-97; Reactive disperse dyes and their application to synthetic fibers, by R. Bugmann, p. 97-110; Dyeing of polyamide fibers with Remazol dyes, by E. Ungermann, p. 111-116; Level dyeing of polyamide products with acid wool dyes by the Cerafil method, by W. Schmiedgen, p. 116-118; Naphthol AS dyeings on polyamide fibers, by H. Seelhorst, p. 119-120; 1:2-Metal-complex disperse dyes in polyamide dyeing, by A. Renaudin and J. Gadenne, p. 120-125; Dyeing of polyamide and protein fibers with neutral-dyeing 1:2-metal-complex dyes, by H. G. Fröhlich, p. 126-128; Flameproofing of textiles from polyamide fibers, by E. P. Frieser, p. 129-131; Coating of polyamide fabrics, by E. Hilscher, p. 131-134; Coating and lining of polyamide fabrics, by F. Kassack, p. 135-138; Waterproofing, coating, and lining of polyamide fabrics, by R. Aenishänslin, p. 139-143; Finishing of petticoats from polyamides, by H. Grünert, p. 144-145; Permanent antistatic finishing of polyamide fibers, by H. Frotscher, p. 145-147; Finishing of Perlon charmeuse, by G. Troeltzsch, p. 147-148; Making-up and uses of Nylsuisse yarns, by W. Grether, p. 148-152. Literature on polyamide fibers (1958-1959), dealing with production, use, properties, testing, and finishing, is appended.

Chemical processes D1

SOME RECENT DEVELOPMENTS IN WOOL TEXTILE FINISHING. C. S. Whewell. Cobbler 12: 26-30 (1959-60). (2784)

Improvements in setting (dry blowing), permanent pleating (Si-Ro-Set process and impregnation with sodium bisulfite as last finishing step), scouring, milling agents, bleaching, non-felting processes (Negafel, Dylan, Melafix, W. I. R. A., and C. S. I. R. O. processes), and modification of dye affinity (Maifoss process, treatment with sulfuric acid and with T. H. P. C.) are reviewed.

NEW FINISHES FOR EASY-CARE WOOL FABRICS. H. P. Lundgren. Modern Textiles Mag. 41: 53-56 (June 1960). (2785)

The author reports on the wool research program being carried out at the Western Utilization Research and Development Div. at Albany, Calif. The new epoxy amino-polyamide finish for felting shrinkage control is discussed in detail.

PRESSURE LOK MACHINE FOR CONTINUOUS ABOVE-BOIL OPEN WIDTH PROCESSING. H. Creegan (James Hunter Mach. Co.). Modern Textiles Mag. 41: 42 (June 1960). (2786)

The Pressure Lok machine is capable of processing fabrics in open width form continuously in a saturated steam atmosphere at pressures up to 50 lb, or the equivalent of 297° F. The machine is based on the development of a pressure seal through which fabrics are able to run into and out of a pressure chamber without any significant loss in pressure.

AN INVESTIGATION OF INORGANIC SALTS AND OXIDES AS FINISHES FOR COTTON. U. S. Agri. Research Serv. Oct. 1959. 50 p. ARS 72-15. Free. (2787)

Part 1. Survey of the literature, by G. E. Wright and R. M. Esteve, Jr., p. 1-12; Part 2. Exploratory evaluation, by P. B. Mack, G. E. Wright, and R. M. Esteve, Jr., p. 13-29; Part 3. Further evaluation of nine promising inorganic compounds, by R. M. Esteve, Jr., G. E. Wright, and P. B. Mack, p. 30-36; Bibliography, p. 37-49. 310 refs.

ALKALINE DEGRADATION OF CHEMICALLY MODIFIED CELLULOSE. W. M. Corbett (Brit. Rayon Research Assoc.). J. Soc. Dyers Colourists 76: 265-271 (May 1960). (2788)

A review is presented of recent work on the alkaline degradation of mono- and poly-saccharide derivatives which are structurally similar to oxidized celluloses. The importance of a β-alkoxycarbonyl elimination reaction is emphasized, and it is shown how such a reaction explains the occurrence of a chain-scission reaction in alkali-treated oxidized celluloses, as well as the formation of several of the acidic products. Graphs, 28 refs.

UVITEX CF CONC. J. Lanter (Ciba Ltd). Ciba Rev. 12, No. 137: 38 (Apr. 1960). (2789)

The intensity of whites obtained with Uvitex CF conc. optical whitener is due to the marked affinity of the product for cellulosic fibers. In addition, it offers the advantage of being applicable in synthetic resin finishing baths.

NEW PROCESS FOR BLEACHING COTTON HOSIERY. H. White (Malna Hosiery Co.). Hosiery Underwear Rev. 43: 67-68 (July 1960). (2790)

Cotton hosiery can be satisfactorily bleached to a full white by first saturating in an alkaline solution of hydrogen peroxide and then subjecting the wet hosiery to a subsequent steaming operation. It can be bleached in approximately 1 hr in existing equipment used by most hosiery dyeing and finishing plants.

BLEACHING OF WOOL AND WOOL MIXTURES WITH HYDROGEN PEROXIDE. G. C. Woodford. Cobbler 12: 17-25 (1959-60). (2791)

Procedures for steep bleaching, continuous bleaching of loose wool in the scouring set, blanket and rug bleaching, worsted sliver bleaching in the backwash unit, continuous bleaching of woolen and worsted yarns, and bleaching pigmented wool by ferrous mordant process are described.

SHRINKPROOFING OF WOOL WITH NEUTRAL PERMANGANATE OR ACID BROMATE IN CONCENTRATED SODIUM CHLORIDE SOLUTION. J. R. McPhee (Wool Research Labs., C.S.I.R.O., Australia). Textile Research J. 30: 358-365 (May 1960). (2792)

This paper describes studies on two promising shrinkproofing treatments found during investigations of the reaction of wool with oxidizing agents in concentrated salt solutions. Each may be used continuously or as a batch process. Each process produces shrinkproofed wool at relatively low cost with no adverse effects of practical significance, although the acid bromate treatment requires a final softening. Tables, 30 refs.

REACTION OF WOOL WITH OXIDIZING AGENTS IN CONCENTRATED SALT SOLUTIONS. J. R. McPhee (Wool Research Labs., C.S.I.R.O., Australia). Textile Research J. 30: 349-357 (May 1960). (2793)

Oxidizing agents can cause severe degradation and, under some conditions, the wool may be completely dissolved. Recent studies on the alkaline degradation of wool showed that certain concentrated salt solutions exert a striking protective effect, and this suggested that wool may also be protected in this way from oxidative degradation. This paper gives the results of an investigation of this suggestion, with particular reference to the shrinkproofing effects produced by treatments with oxidizing agents in salt solutions. Tables, 56 refs.

STUDIES ON THE PROPERTIES OF BACTERICIDES AND FUNGICIDES. J. J. Moran (Thomson Research Associates Ltd). Can. Textile J. 77: 51-53 (May 13, 1960). (2794)

The applications and properties of the phenolics, copper and zinc compounds, quaternary ammonium compounds, and mercurials and other organo-metallic compounds are discussed.

NEW FINISHES IN TEXTILES. C. S. Whewell. Textile Mfr. 86: 205-207 (May 1960). Textile Weekly 60 (1): 945-946 (Apr. 15, 1960); 1004, 1024 (Apr. 22, 1960). (2795)

Review of developments in wash and wear, crease-proofing, and flameproofing, finishes for cellulose, as well as wash and wear and mothproof finishes for wool.

PROGRESS IN WASH-WEAR FINISHING OF CELLULOSIC FABRICS. T. J. Cronin, Jr. (Quaker Chem. Prods. Corp.). Am. Dyestuff Reptr. 49: 389-391, 398 (May 30, 1960). (2796)

This paper discusses the present status of wash-and-wear finishing of cotton and rayon fabrics, including recent developments in creaseproofing agents. The limitations of today's finishes are considered from the standpoint of improvements which may be forthcoming from current research. Graphs, tables, 14 refs.

NEW REACTANT RESIN FOR WASH-AND-WEAR FINISHING OF COTTON FABRICS. C. R. Williams (Monsanto Chem. Co.). Am. Dyestuff Reptr. 49: P431-P438 (June 13, 1960). (2797)

The characteristics of the presently available resin systems are reviewed, and performance and processing data on a new resin system, Resloom E-63, are presented. Tables, 36 refs.

MANMADE CELLULOSIC FIBERS IN WASH-AND-WEAR. A. B. Hilton, G. V. Lund, and A. E. Martin, Jr. (Courtaulds (Ala.) Inc.). Am. Dyestuff Reptr. 49: 392-398 (May 30, 1960). (2798)

A discussion of fundamental fiber, yarn, and fabric properties which influence wash-and-wear performance is given and compared with laboratory methods of estimating such performance. The behavior of cross-linked viscose staple in blends with acrylic and polyester fibers is compared with resin-treated cotton and resin-treated viscose fabrics. Points of comparison are crease recovery angle, bending modulus, wash-and-wear ranking, as well as tensile properties. Included are comparisons of dimensional stability and general behavior to laundering. Also discussed are the properties of high wet modulus viscose fiber, and indications of this fiber's behavior in the wash-and-wear field. Graphs, tables, 10 refs.

SOIL-RETARDANT FINISH FOR TUFTED CARPETING. Ciba Ltd. Am. Textile Reptr. 74: 20 (June 2, 1960). (2799)

The principal features of the Antisoiling TC finish are: very simple method of application to carpets; fully effective on both white and colored substrates; lightfastness of dyeings unaffected; causes no change of shade; resilience of pile is left unimpaired; no tendency of the finished carpet to give off dust; and the finish withstands cleaning with detergents.

IRONING OF RESIN-TREATED CELLULOSIC FABRICS. H. Corteen. Reply: A. R. Urquhart. (Letters to the editor). J. Textile Inst. 51: P249 (May 1960). (2800)

CHANGES IN FINE STRUCTURE AND MECHANICAL PROPERTIES INDUCED BY CYANOETHYLATION OF COTTON YARNS. PART 1. TREATED WITHOUT TENSION. C. M. Conrad, D. J. Stanonis, P. Harbrink, and J. J. Creely (So. Reg. Research Lab.). Textile Research J. 30: 339-348 (May 1960). (2801)

Cotton yarns were cyanoethylated, without tension, to various degrees of substitution and studied with particular reference to changes in the mechanical properties and molecular structure. Photos, graphs, table, 14 refs.

PREPARATION AND RATES OF HYDROLYSIS OF PERFLUORO ESTERS OF CELLULOSE. R. R. Benerito, R. J. Berni, and T. F. Fagley (So. Reg. Research Lab.). Textile Research J. 30: 393-399 (May 1960). (2802)

Partial esters of cellulose varying in degree of substitution from 0.02 to 0.58 were prepared by reacting cotton immersed in dimethylformamide with either perfluorobutyryl chloride or perfluorooctanoyl chloride in the presence of a tertiary aromatic amine. The use of essentially homogeneous solutions of acid chlorides resulted in products which retained properties of the original cotton and showed in addition oil and water repellency which was durable to dry cleanings and aqueous launderings in the presence of neutral detergents. Rates of uncatalyzed hydrolysis of the perfluorooctanoyl cellulose esters were determined at 25°, 35°, and 45° C, and the rate of the alkaline catalyzed hydrolysis was estimated at 25° C. The energy and entropy of activation for the uncatalyzed hydrolysis were determined. Photomicrograph, tables, 13 refs.

METHODS FOR WATERPROOFING TEXTILES. H. Schmink. Deut. Textiltech. 10, No. 2: 80-82 (1960). In German. Through BCIRA 40: 1548 (1960). (2803)

In conclusion of the previous article (abstr. 1974/60), the author gives practical hints for the use of silicones (concerning the pretreatment, absorbability of the fabric to be treated, choice of wetting agents, method of waterproofing, removal of water-repellent impregnations), and enumerates the main methods for testing the water-repellency of the treated fabrics.

CAUSTIC STORAGE TANK. Textile Inds. 124: 88 (June 1960). (2804)

Details of the tank construction are noted. Diagrs.

Dyeing and printing D2

EFFECT OF STRUCTURE ON THE CHANGE IN COLOR OF VAT DYES ON SOAPING. J. Wegmann. J. Soc. Dyers Colourists 76: 282-300 (May 1960). (2805)

After a general survey of the problem of the changes in color which accompany the soaping of vat dyes, it is shown that, at least for a limited range of dyes, the 1,4-dibenzamidoanthraquinones, such changes must be due to changes of a molecular character. A working hypothesis has been evolved according to which the different forms are to be regarded as representing a new type of isomerism, termed contact isomerism, and can be visualized as partly existing in solid form, and in isolated cases even as crystalline modifications, in conformity with the earlier hypothesis of different polar forms. The marked effects of certain substituents on the color, hitherto inexplicable, can be explained by a predominating effect on the resulting isomeric composition, acting alongside the normal effect of the substituents. Various anomalies that can occur during development can be readily explained on this basis. Photos, diagrs, graphs, 28 refs.

PRETREATMENT AND DYEING OF DYNEL. H. Stern and H. Schenk (Ciba Ltd). Ciba Rev. 12, No. 137: 30-32 (Apr. 1960). (2806)

Scouring, bleaching, and dyeing procedures with Cibacet and Cibalan dyes are covered. Fastness properties of Cibacet and Cibalan dyes are listed.

REACTIVE DYES COME OF AGE. A. J. Hall. Textile World 110: 98 (June 1960). (2807)

The advantages, mechanism of action, and application of the Procinyl dyes are summarized.

DEAD AND IMMATURE COTTON FIBERS: THEIR IDENTIFICATION AND DISGUISE. H. Beiertz and H. Becker. Z. ges. Textil-Ind. 62, No. 6: 203-205 (1960). In German. Through BCIRA 40: 1690 (1960). (2808)

A survey is made of the processes used at present to eliminate chemically defective cotton fibers from yarns and fabrics (scouring, mercerizing, kier-boiling, bleaching), and the possibility of identifying and disguising the presence of dead and immature fibers by dyeing with certain direct, sulfur, and vat dyes is pointed out. Suitable dyes are listed.

NEW DEVELOPMENTS IN DYEING POLYESTER FIBERS. J.-P. Niederhauser. Teintex 25, No. 2: 79-100 (1960). In French. Through BCIRA 40: 1539 (1960). (2809)

Recent developments in dyeing and printing of polyester fibers are reviewed, with special reference to a new class of dyes described as esterophilic dyes, which have now passed the experimental stage and are used successfully under industrial conditions. Methods of their application are described. 17 refs.

CIBACRON DYES: EFFECT OF STEAMING TIME IN THE PAD-STEAM PROCESS. M. Peter (Ciba Ltd). Ciba Rev. 12, No. 137: 39 (Apr. 1960). (2810)

A series of tests carried out on cotton fabric have shown that a full yield is obtained with certain Cibacron dyes, particularly in the case of pale shades, by a steaming run of 30 sec.

RATE-OF-DYEING CURVES OF DEORLENE DYES ON ORLON-42. H. Stern (Ciba Ltd). Ciba Rev. 12, No. 137: 33-35 (Apr. 1960). (2811)

GENERAL REVIEW OF WOOL DYEING. W. Hulme (Paton Mfg. Co. Ltd). Can. Textile J. 77: 50-52, 55-56 (June 10, 1960). (2812)

The paper enumerates the different types of dyestuffs and their methods of application, including the acid dyes, the 1:1 metal-complex or old premetalized dyes, the 1:2 metal-complex new premetalized dyes and chrome colors. Raw stock dyeing, top dyeing, yarn dyeing, and piece dyeing is discussed, as well as some problems in the dyeing of mixtures.

NEW DEVELOPMENT IN DYEING AND PRINTING POLYESTER FIBERS. D. Marian (Compagnie Francaise des Matieres Colorantes). Am. Dyestuff Reptr. 49: 399-402 (May 30, 1960). (2813)

The new range of dyestuffs, known as the Esterophiles, reportedly offers advantages in outstanding lightfastness, brightness, and fastness to sublimation. It is claimed that the Esterophiles are the first range of dyestuffs for dyeing and printing of polyester fibers to offer these properties for each of its constituents. The paper gives in detail theoretical information about the Esterophiles; examples of industrial applications in dyeing, direct, and vigoreux printing, and information about their use in combination with other dyestuffs on union goods. Photos, graph, tables.

SATURATION VALUES AND K FACTORS OF DEORLENE DYES ON ORLON. H. Stern (Ciba Ltd). Ciba Rev. 12, No. 137: 32-33 (Apr. 1960). (2814)

PRETREATMENT AND DYEING OF POLYVINYL CHLORIDE FIBERS. H. Stern and H. Schenk (Ciba Ltd). Ciba Rev. 12, No. 137: 27-30 (Apr. 1960). (2815)

Suitable scouring and bleaching procedures for PVC fibers and their blends are suggested, and methods of dyeing PVC fibers of the Rhovyl and Thermovyl type, as well as for blends with wool, cellulose, and nylon are given.

PREDYEING STEPS FOR LEVEL WOOL DYEING. PART 1. C. H. A. Schmitt (Sandoz, Inc.). Modern Textiles Mag. 41: 31-32 (June 1960). (2816)

Recommendations for spinning, weaving, slashing, crabbing, carbonizing, neutralizing, fulling, and scouring are given.

DYEING ACRYLICS IN YARN FORM. J. F. Gaunt (Patons & Baldwins Ltd). Textile Mfr. 86: 195 (May 1960). (2817)

Reference is made to the three general types of machines in use: package, those in which hanks are moved mechanically through a static dye liquor, and those in which the hanks are held stationary and the liquor is circulated.

APPLICATION OF COLORIMETRY IN THE TEINTOFIX 58 MACHINE. F. Braun. Teintex 25, No. 2: 129-131 (1960). In French. Through BCIRA 40: 1534 (1960). (2818)

The machine (developed by the Heliot Company) detects and corrects automatically all deficiencies in the trichromatic dye mixture, occurring during dyeing of nylon stockings, by colorimetric measurements. It can also be used in predetermining the dye composition.

MODERN DYEING MACHINERY. B. Bamforth. Cobbler 12: 31-37 (1959-60). (2819)

Developments in loose material, yarn and slubbing, and piece machines, with emphasis on those manufactured by Longclose Engineering Co., are reviewed.

ORIGINS OF ENGLISH CALICO PRINTING. P. C. Floud. J. Soc. Dyers Colourists 76: 275-281 (May 1960). (2820)

PRINTING ON SYNTHETIC FIBERS. H. Werdenberg (Ciba Ltd). Ciba Rev. 12, No. 137: 36-37 (Apr. 1960). (2821)

Methods available for printing polyvinyl chloride, acrylic, and Dynel modacrylic fibers are outlined.

SUBSTANTIVITY AND AFFINITY. H. Zollinger. Textil-Rundschau 15, No. 2: 75-78 (1960). In German. Through BCIRA 40: 1535 (1960). (2822)

Referring to the article by J. Wegmann (abstr. 1508/60), the author argues that, in dyeing processes, the terms affinity and substantivity are to be regarded as synonyms, but absorptive power and perhaps also firmness of attachment can be used as qualitative characteristics in the sense described by Wegmann.

SOME THEORETICAL CONSIDERATIONS OF THE DYEING OF CELLULOSE ACETATE WITH DISPERSE DYES. H. J. White, Jr. (Textile Research Inst.). Textile Research J. 30: 329-338 (May 1960). (2823)

Theoretical aspects of the disperse dyeing of secondary cellulose acetate are considered. Two models for the dyeing process are developed provisionally, one based on mixing of polymer segments with absorbed molecules, one based on absorption onto sites within the fiber. From a consideration of the experimental results available, the model based on mixing is rejected as unsatisfactory. The model based on absorption onto sites is qualitatively consistent with most of the experimental results available. Although both models are crude approximations, the qualitative agreement with experiment shown by the site model offers the possibility that it may be used as a stepping stone to further experiments and development of a more exact theory of disperse dyeing for cellulose acetate. Graphs, 30 refs.

APPARATUS FOR PRINTING TRADEMARKS ON TO THE SELVAGE OF FABRICS. H. Klüy. Textil-Rundschau 15, No. 2: 80-82 (1960). In German. Through BCIRA 40: 1540 (1960). (2824)

The automatic selvage-printing device described (Heberlein & Co. AG) features a new pneumatic control which causes the printing mechanism to follow the lateral movement of the selvage. Where the selvage is not to be printed, the drive of the mechanism can be disconnected by means of a coupling.

NEW METHODS OF COLORING CARPETS. R. C. Cheetham, G. W. Lewis, and F. Waller (Courtaulds Ltd). Man-Made Textiles 37: 47, 49 (May 1960). (2825)

The various methods available for the coloring of carpet piecegoods include those based on a conventional process, such as dyeing on the winch or on beam, and printing by established techniques suitably modified to accommodate the special features of carpet pile. Other and more novel methods or adaptations of existing principles for coloring carpet involve spraying, stencils, the pad-steam process, plastic-covered rollers, etc. The usual immersion procedure and an air-spraying technique are described. Diagrs, 8 refs.

INTRODUCTION TO COPPER PHTHALOCYANINE PIGMENTS. J. F. Santimauro (Nat. Aniline Div.). Dyestuffs 43: 158-163 (June 1960). (2826)

CORRELATION BETWEEN COLORFASTNESS AND STRUCTURE OF ANTHRAQUINONE BLUE DISPERSE DYES. V. S. Salvin and R. A. Walker (Celanese Corp.). Textile Research J. 30: 381-388 (May 1960). (2827)

A correlation is established between the structure of blue amino anthraquinone dyes for cellulose acetate, cellulose triacetate, and the polyester fibers and the colorfastness they exhibit towards the atmospheric agents responsible for gas and ozone fading and towards the action of light. Any structural modification which reduces the electron density on the amino nitrogen attached to the anthraquinone ring, whether it is an amino, an alkylamino, or an arylamino nitrogen, will increase the resistance of the molecule to the electrophilic agents responsible for the chemical changes which occur during fading. Several anthraquinone structures with improved resistance to fading are reported. These contain, as substituents on the arylamino radical, groups which withdraw electrons from the aromatic ring, leaving the amino nitrogen with a low electron density. Tables, 11 refs.

NEWER DEVELOPMENTS IN THE FIELD OF DYEING WITH SULFUR DYESTUFFS. H. Musshoff (Casella Farbwerke Mainkur). Can. Textile J. 77: 43-46, 49 (June 10, 1960). (2828)

The historical background of the sulfur dyes is briefly reviewed, and the advantages and methods of application of the water soluble sulfur dyes are reviewed.

WORK STUDY IN DYE HOUSES. G. C. Battye. Cobbler 12: 44-49 (1959-60). (2829)

TECHNIQUE OF FAULT INVESTIGATION. D. K. Clough. Cobbler 12: 38-43 (1959-60). (2830)

Methods of determining the causes of dyeing defects due to wool damage are described. Faults due to mechanical causes, uneven modification of the chemical affinity of the fabric for dyes, to the presence of contaminants, and to atmospheric conditions are covered.

TESTING AND MEASUREMENT E

CONTROL CHARTS AND STOCHASTIC PROCESSES. G. A. Barnard. J. Roy. Statistical Soc. Ser. B, 21, No. 2: 239-271 (1959). (2831)

Special emphasis is given to the new types of cumulative sum control charts.

Fibers E1

CORE-TESTING OF WOOL IN AUSTRALIA. J. A. Dixie (Australian Wool Testing Authority). Wool Record 97: 1539 (June 10, 1960). (2832)

Use of a manually operated wool corer for taking "in depth" samples of wool from bales without unpacking or even opening them is described.

MEASURING FLEX RESISTANCE. Skinner's Silk & Rayon Record 34: 444, 446 (May 1960). (2833)

The Hungarian fiber flexing tester system of Lajos Kanyák determines the resistance of fibers to repeated flexing stresses. Its construction and operation are described. Photos, diagrs.

QUANTITATIVE DETERMINATION OF REGENERATED PROTEIN FIBERS IN YARN BLENDS. E. Frieser. Textil-Rundschau 15, No. 2: 65-74 (1960). In German. Through BCIRA 40: 1578 (1960). (2834)

After a survey of the possibilities for qualitative differentiation between artificial protein fibers (ninhydrin reaction, Morse test, swelling in concentrated sulfuric acid, solubility in N hydrochloric acid, dyeing with Alizarin Red AS, determination of phosphate content), the author discusses in detail the methods for quantitative determination of regenerated protein fibers (from milk casein, maize zein, soya and groundnut protein) in the presence of wool, cotton, and viscose rayon staple fibers. The methods described are applicable only to rovings, yarns, and knitted and woven fabrics. For the quantitative analysis of felt, special measures are necessary for dissolution. 30 refs.

Yarns E2

THE FREE DIAMETER AND SPECIFIC VOLUME OF TEXTILE YARNS. A. Barella. Reply: B. E. Van Issum and N. H. Chamberlain (Leeds Univ.). (Letters to the editor). J. Textile Inst. 51: T208-T214 (May 1960). (2835)

EVALUATION OF TENSILE ELASTICITY TESTS. P. Hempel and E. Viertel. Deut. Textiltech. 10, No. 2: 61-65 (1960). In German. Through BCIRA 40: 1580 (1960). (2836)

Since the existing methods and, in particular, the method specified in DIN 53 835 for testing the elastic behavior of yarns and threads are associated with certain disadvantages and lead to inaccuracies, determination of the elasticity of yarns by stepwise loading up to the lower breaking limit and of fabrics by stepwise elongation up to the lower breaking limit is suggested. Both methods are used in the Research Institute for Textile Technology Karl-Marx-Stadt.

YARN-SPEED METER: A LOW-TORQUE INSTRUMENT FOR MEASURING THE LINEAR SPEED OF LOW-INERTIA SYSTEMS. D. L. Munden and T. K. Morley (Hosiery & Allied Trades Research Assoc.). J. Sci. Instr. 37: 157-159 (May 1960). (2837)

A small portable low-torque tachometer is described which has been designed to measure linear speeds of running yarns or threads. The instrument is a simple capacitor-switching circuit, power being provided by a small mercury-amalgam cell contained in the handle of the instrument. The instrument has been used to measure yarn speeds of up to 1200 ft/min to an accuracy of $\pm 1\%$ within the calibrated limits. Photo, diagrs.

SKEIN STRENGTH OF THE YARN IN METRIC SYSTEM. R. L. N. Iyengar, V. V. Gupte, H. Rao Navkal, and V. N. Modak (Indian Central Cotton Comm.). Indian Textile J. 70: 303-307 (Mar. 1960). (2838)

A new yarn strength index is defined. It is given by the breaking strength in grams of a metric skein of yarn, consisting of 100 loops each of one meter length, divided by its tex number. Graph, tables, 2 refs.

ANALYSIS OF VARIATIONS FOR CERTAIN PHYSICAL PROPERTIES OF COMBED COTTON YARNS. D. S. Hamby, W. C. Stuckey, B. Gast, and R. J. Hader (N. C. State Coll.). Textile Research J. 30: 435-443 (June 1960). (2839)

This study was designed to provide information as to the levels of the quality measurements normally used in evaluating yarns. The properties covered include: skein strength, single end strength, yarn number, twist, and uniformity. Graphs, tables, 7 refs.

KINETIC YARN FRICTION AND KNITTING. T. S. Nutting (Hosiery & Allied Trades Research Assoc.). J. Textile Inst. 51: T190-T202 (May 1960). (2840)

An apparatus for the measurement of the kinetic friction of hosiery yarns is described. The importance of kinetic yarn friction in the weft-knitting action and the resultant changes in fabric dimensions are pointed out. Photo, diagrs, graphs, tables, 18 refs.

Fabrics E3

COMPARISON BETWEEN TWO METHODS OF MEASURING THE FLAMMABILITY OF FABRICS. H. G. Wraight and P. H. Thomas (Brit. Fire Research Station). J. Textile Inst. 51: T203-T207 (May 1960). (2841)

Rates of spread of flame up fabrics both vertically and at an angle of 45° are given, and the relationship between the two methods of tests making use of these different orientations of the fabric is discussed. Graph, table, 10 refs.

WATER REPELLENCY--CREASE RESISTANCE. LABORATORY TESTS. COMPARISON OF METHODS. PART 1. M.-C. Danguillaume. Rev. Textile 58, No. 8: 371-376 (1959). In French. Through BCIRA 40: 1549 (1960). (2842)

In this review the author discusses various tests for evaluating the water permeability of waterproofed fabrics, the mechanism of wetting, various factors affecting the water permeability, and chemical waterproofing treatments applicable to manmade fiber fabrics. 42 refs.

TEXTILES: DETERMINATION OF THE AIR PERMEABILITY OF FABRIC, HOSIERY AND KNITTED GOODS, AND FELTS. Swiss Standards Assoc. Textil-Rundschau 15, No. 2: 79 (1960). In German. Through BCIRA 40: 1588 (1960). (2843)

The Swiss specification SNV 98 561 describes the method and apparatus for determining the air permeability of textiles, with a permeability of about 3-6,000 l/sq m/sec at pressures of 5-30 mm water column.

STIFFNESS MEASUREMENT ON FELTS. H. Jörder. Z. ges. Textil-Ind. 62, No. 6: 205-206 (1960). In German. Through BCIRA 40: 1726 (1960). (2844)

A new method is described which, owing to its good reproducibility, is also suitable for determining the stiffening effect in dependence of the stiffening agent concentration and for determining the elasticity of interlinings. The apparatus is very simple; the measurement is carried out on cylindrical felt samples weighted with a suitable load for about 30 sec. The diameter of the deformed felt (vertical axis) is a measure of its stiffness; the higher the value, i.e. the lower the deformation of the sample, the more effective is the stiffening.

METHOD FOR TESTING THE RESISTANCE OF TEXTILE MATERIALS TO MICROBIOLOGICAL ROTTING. R. Ashcroft and W. A. Bell (Brit. Jute Trade Assoc.). J. Textile Inst. 51: T175-T189 (May 1960). (2845)

The method described is a modification of the conventional soil burial test. Strips of cloth are laid across bands of soil (1/8 in. thick) on glass plates, and are incubated under controlled conditions of temperature, humidity, and air supply. The testing arrangement is compact, and the samples are visible throughout the test. Experiments to assess the uniformity of the biological conditions and to examine the effect of variations in the temperature, moisture conditions, and the composition of the inoculum are also described. Photo, graphs, tables, 10 refs.

USE OF THE POINT SYSTEM IN FABRIC EVALUATION. P. E. Bianco (Cluett, Peabody & Co.). Textile Bull. 86: 41-42 (June 1960). (2846)

The point grading system for quality evaluation of fabrics is critically examined, and its advantages and disadvantages are discussed.

Other E4

SEPARATION AND IDENTIFICATION OF COMMERCIAL DYES BY PAPER CHROMATOGRAPHY. PART 1. ACID DYES. C. McNeil (Tech. Coll., Paisley). J. Soc. Dyers Colourists 76: 272-275 (May 1960). (2847)

The use of paper chromatography in separating commercial dyes is discussed briefly, and some simple apparatus is illustrated. Methods are given for the separation of level-dyeing, milling acid, and neutral-dyeing acid dyes, as well as chrome dyes. Possible applications are outlined. Diagrs, tables, 4 refs.

DETERMINATION OF AVERAGE CELL VOLUME IN FOAMED PRODUCTS. R. H. Harding (Union Carbide Chem. Co.). Modern Plastics 37: 156-160, 212-213 (June 1960). (2848)

A simple method is presented for the measurement of the open cell content and average cell volume of a foamed product. Graphs, tables.

SPOT TESTS FOR PLASTICS. F. Feigl and V. Anger. Modern Plastics 37: 151, 191, 194, 196 (May 1960). (2849)

Pyrolysis reactions characteristic of certain organic compounds may be useful in testing synthetic resins and plastics. This paper presents simple solutions to identification problems using this method with the aid of spot test examination. 9 refs.

MILL MANAGEMENT F

Industrial engineering F1

MANUFACTURING RESEARCH AND CAPITAL COSTS: PHILOSOPHICAL AND PRACTICAL CONSIDERATIONS FOR MANAGEMENT. R. W. Bolz. Automation 7: 56-62 (June 1960). (2850)

PUTTING VALUE ANALYSIS ON A FORMALIZED BASIS. C. Eastwood. Textile Bull. 86: 35-36 (June 1960). (2851)

The object of formalized value analysis is to get the top value out of each dollar spent for supplies, repair parts, or capital equipment. A case history of a fictional analysis is outlined to explain the mechanics involved.

LOW-COST MILL-WASTE DISPOSAL. Textile World 110: 71-75 (June 1960). (2852)

The problems of efficient waste disposal are discussed, and methods of reducing costs by cutting waste volume, modifying processes, recovering or substituting chemicals, separating wastes, using a stepped-up aeration system based on lagooning or a bisorption system are described. Sources of additional information on waste disposal methods are included. Tables.

HOW TO MANAGE THOSE RUSH JOBS. F. H. Drewes. Textile Inds. 124: 93-96 (June 1960). (2853)

Steps the supervisor can take in handling rush orders are noted.

SAFETY IS AN ATTITUDE! S. O. Brookes (J. P. Stevens & Co.). Textile Inds. 124: 108-111, 115 (June 1960). (2854)

How personnel at a 500-employee spun synthetics mill achieved 5 million safe man-hours is described.

MILL CHECK-UP. PART 5. INSPECTION OF DRAWING FRAME OPERATIONS. A. L. Landau (Saco-Lowell Shops). Textile World 110: 46-47 (June 1960). (2855)

WASTE TREATMENT AT CANNON MILLS. J. L. Brown, Jr. (Cannon Mills). Textile Inds. 124: 78-81 (June 1960). (2856)

The disposal of domestic sewage from the mills and mill village, as well as certain textile processing wastes from the wet processing plant and slasher rooms, is described. Photos, diagr, table.

MOTION-TIME-ANALYSIS. A. B. Segur. Am. Textile Reptr. 74: 21-22, 52 (June 9, 1960). (2857)

The value of motion-time-analysis and its use are explained.

WORKLOAD STUDY IN TEXTILE MILLS. U. Bhattacharya. Indian Textile J. 70: 313-316, 327 (Mar. 1960). (2858)

Brief review of some American methods. Tables, 3 refs.

PRODUCTION PLANNING AND CONTROL. L. Bellwood. Wool Rev. 33: 27 (May 1960). (2859)

Part 4. Spinning production. Yarn twisting.

CONDUCTING A MILL TRAINING PROGRAM. C. R. Beall (Opp-Micolas Cotton Mills). Textile Bull. 86: 43-44, 46 (June 1960). (2860)

The objectives and implementation of the training program at Opp-Micolas Cotton Mills are outlined.

Plant and equipment F2

NOISE CONTROL IN TEXTILE PLANTS. P. W. Sherwood. Can. Textile J. 77: 39-40 (May 27, 1960). (2861)

The effect of noise level on human health is discussed, and suggested standards for permissible noise are noted.

MAINTENANCE OF ELECTRICAL CONTROLS. H. A. Wright (Allis-Chalmers Mfg. Co.). Textile Inds. 124: 116-125 (June 1960). (2862)

A preventive maintenance checklist and a trouble shooting chart are included.

TEXTILE MILL MAINTENANCE. PART 5. F. H. Slade. Textile Mfr. 86: 181-185 (May 1960). (2863)

Description and operation of some of the latest pneumatic and hydraulic equipment. Textile applications include powered hand tools, and equipment on warping and beaming machines, roller printers, finishing machines and presses, etc. Photos.

ELECTRICAL MAINTENANCE. Textile World 110: 55 (June 1960). (2864)

Basic steps in a maintenance program for electrical equipment are outlined.

DESIGN AND USE OF AIR CONDITIONING SYSTEMS IN TEXTILE MILLS. PART 2. DETERMINATION OF AIR CONDITIONER CAPACITY BY NEW NOMOGRAPHS. Y. Niitsu and A. Yoshikawa. J. Textile Machy. Soc. Japan 13, No. 2: 109-114 (1960). In Japanese (English summary). Through BCIRA 40: 1599 (1960). (2865)

The nomographs are used to determine air flow (amount and rate) and the temperature of spray water.

LUBRICATION OF THE SPINDLE BEARINGS OF MECHANICAL COTTON PICKERS WITH ALERT 380. Oilways 26: 7-8 (June 1960). (2866)

MAGNETIC POWDER CLUTCHES AND THEIR APPLICATION IN THE TEXTILE INDUSTRY. F. Lammers. Melliand 41, No. 2: 56-60 (1960). (2867)

The magnetic powder cluth is an electromagnetic friction clutch. The magnetic powder assumes the role of the brake lining. The great number of points of contact made by the particles of the magnetic powder ensure an almost constant coefficient of friction. Due to the gradual build-up of the magnetic field, the action of the magnetic powder clutch is very smooth. Photos, diagr, graph.

SCIENCES G

Chemistry G1

CORRESPONDENCE REGARDING SEGAL ET AL. PAPER ON AN EMPIRICAL METHOD FOR ESTIMATING THE DEGREE OF CRYSTALLINITY OF NATIVE CELLULOSE USING THE X-RAY DIFFRACTOMETER. O. Ant-Wuorinen. Reply: L. Segal, J. J. Creely, and C. M. Conrad. (Letters to the editor). Textile Research J. 30: 402-403; 404 (May 1960). (2868)

The terminology used in the Segal paper (abstr. 3909/59) is discussed.

ACID HYDROLYSIS OF CHEMICALLY MODIFIED CELLULOSES. E. H. Daruwalla, P. J. Kangle, and G. M. Nabar (Univ. Bombay). (Letter to the editor). Textile Research J. 30: 469-471 (June 1960). (2869)

Results of preliminary experiments on the action of dilute sulfuric acid on oxycelluloses prepared by the action of potassium metaperiodate and a mixture of potassium dichromate and oxalic acid together with those on their respective reduced forms obtained by sodium borohydride reduction are given. Table, 9 refs.

WEATHERING AND THE RESULTING CHEMICAL CHANGES IN SOME SOUTH AFRICAN MERINO WOOLS. D. F. Louw (Deutsches Wollforschungsinst.). Textile Research J. 30: 462-468 (June 1960). (2870)

Differences in chemical composition between root, middle, and tip sections of a number of normal crimped and of copper-deficient steely South African Merino wools have been investigated, as well as the influence of these differences on such factors as acid dye absorption, alkali solubility, and urea-bisulfite solubility. In the case of normal wools the loss in cystine and tryptophan and increase in cysteic acid reveal the extent of hydrolytic and oxidative weathering damage and explain subsequent changes in solubility and dye absorption. The conclusion is reached that copper-deficiency retards fiber keratinization which can, however, continue during aging and weathering of steely wools on the animal's back, resulting in increased cross-linking. Variations in amino acid content of root and tip sections of normal and steely wools have been found. Tables, 37 refs.

PROPERTIES OF TEXTILE MATERIALS. PART 10. CHEMICAL ATTACK OF TEXTILE FIBERS. PART 2. PROTEIN FIBERS: (B) SILK FIBROIN. F. O. Howitt (Wool Inds. Research Assoc.). J. Textile Inst. 51: P238-P248 (May 1960). (2871)

Following a discussion of the chemical composition of fibroin, the effects of various chemical reagents (e.g. acids, alkalis, oxidizing agents, reducing agents, salt solutions, organic solvents, halogens, and cross-linking agents) are reviewed.

EFFECT OF DIFFERENT DETERGENTS ON APPEARANCE OF HOME LAUNDRY WASHED IN DIFFERENT APPLIANCES. F. Ehrenkranz (Univ. of Minn.). Soap Chem. Specialties 36: 47-50 (June 1960). (2872)

This study was planned to determine the effect of detergents on appearance of bed sheets, pillow cases, and towels used by participants in the project and washed in different automatic washers with minimum amounts of detergent. Detergent concentrations to be used were established by checking detergent build-up in unsoiled articles washed with several concentrations. 11 refs.

ULTRAVIOLET IRRADIATION OF POLY(ETHYL ACRYLATE) IN VACUUM. PART 1. SWELLING, SOLUBILITY, AND VISCOSITY. H. Jacobs and R. Steele (Rohm & Haas Co.). J. Appl. Polymer Sci. 3: 239-244 (Mar./Apr. 1960). (2873)

ULTRAVIOLET IRRADIATION OF POLY(ETHYL ACRYLATE) IN VACUUM. PART 2. MECHANISM OF THE REACTION. H. Jacobs & R. Steele (Rohm & Haas Co.). J. Appl. Polymer Sci. 3: 245-250 (Mar./Apr. 1960). (2874)

SOME EXPERIMENTS ON VISCOSE RAYON STABILIZED BY HEAT TREATMENT. K. Kanamaru and K. Koyano. J. Appl. Polymer Sci. 3: 143-152 (Mar./Apr. 1960). (2875)

An experimental study, in which acetic acid is used as the swelling agent instead of sulfuric acid because it is expected that acetic acid, being volatile, is held less strongly, if at all, in the structure during the heat treatment and accordingly is more desirable than less volatile inorganic acids which may cause more severe degradation of the fibrous structure. Diagrs, graphs, tables, 12 refs.

SOME PROPERTIES OF GAMMA-IRRADIATED STARCHES AND THEIR ELECTRODIALYTIC SEPARATION. M. Samec. J. Appl. Polymer Sci. 3: 224-226 (Mar./Apr. 1960). (2876)

Potato, wheat, and maize starches were irradiated in glass vessels with a dose of 2,000,000 rep of gamma rays from Co^{60}. The starches were heated for 30 min at 120° and their solutions were investigated. In general, there occurs a change of the starch into soluble starch. Photos, table, 6 refs.

Physics G2

EFFECTS OF GAMMA RADIATION ON COTTON CELLULOSE. J. C. Arthur, Jr., F. A. Blouin, and R. J. Demint (So. Reg. Research Lab.). Am. Dyestuff Reptr. 49: 383-388 (May 30, 1960). (2877)

The effects of high energy gamma radiation on the properties of purified cotton cellulose, at several dosage levels ranging to 100,000,000 roentgens, were determined. The major structural changes, which occurred on irradiation, were the formation of carbonyl and carboxyl groups and the cleavage of the cellulose molecule. The fibrous structure of the cellulose disintegrated at dosages higher than 5 to 10 million roentgens with loss of textile properties. Graphs, tables, 19 refs.

MISCELLANY H

PROTECTING YOUR NEW IDEAS. V. A. Scher. Textile World 110: 38-39 (June 1960). (2878)

Basic principles governing patents (design and invention), trademarks, and copyrights are briefly summarized.

TEXTILE TERMS AND DEFINITIONS. 4th ed. The Textile Institute, 10 Blackfriars St., Manchester 3, England. 1960. 167 p. (2879)

The 4th edition contains the revised substance of the first three editions together with a number of new terms relating to defects and fabric faults, and cloth assessment in terms of cover factors and cloth geometry. Approximately 1700 terms are included.

AN INVESTIGATION INTO THE FUTURE CONSUMPTION OF TEXTILE FIBERS AND CLOTHING IN WESTERN EUROPE. M. Fraenkel. Intern. Rev. Cotton Allied Textile Inds. 28: 144-151 (June 1960). (2880)

The expected level of Western European clothing consumption in 1970.

TEXTILE INDUSTRY IN ISRAEL. S. Gur-Arye. Intern. Rev. Cotton Allied Textile Inds. 28: 128-132 (June 1960). (2881)

CHINA'S COTTON TEXTILE INDUSTRY: A NEW SURVEY. Intern. Rev. Cotton Allied Textile Inds. 28: 115-128 (June 1960). (2882)

A survey of the development of the Chinese cotton textile industry since the Communist regime was established in 1949. It is based entirely on Chinese sources as listed. Tables, 28 refs.

PATENT CHECKLIST

U.S. patents may be obtained from the U.S. Patent Office, Washington 25, D.C., for 25¢ a copy. Photostatic copies of foreign patents are also available. Charges for these photostats are based on the number of pages in the patent.

FIBERS A

Manmade fibers A2

POLYACRYLONITRILE FILAMENTS OF IMPROVED DYEABILITY. W. R. Kocay, W. J. Clark, and G. P. Vescio (to Am. Cyanamid Co.). USP 2 936 211, May 10, 1960. (2883)

Gelled polyacrylonitrile tow is treated with ammonia to remove any bound anions and while still wet is contacted with an aqueous solution of an acid.

YARN PRODUCTION B

CRIMPED VISCOSE FIBERS. Phrix Werke AG. BP 827 558, Feb. 10, 1960. Through BCIRA 40: 1481 (1960). (2884)

One-third of the predetermined stretch is applied while the viscose filaments in the acid bath are still substantially cellulose xanthate, the remaining stretch is applied in a following acid bath, and when the regeneration is complete the filaments are cut to staple, washed in hot water, after-treated and dried.

LUBRICATION OF HYDROPHOBIC FILAMENTS. J. F. L. Roberts and F. C. Mallett (to Imp. Chem. Inds. Ltd). BP 828 735, Feb. 24, 1960. Through BCIRA 40: 1668 (1960). (2885)

Hydrophobic filaments containing a major proportion of the polymer in the isotatic form (e.g. polypropylene) are brought into contact with an aqueous solution containing a polyethylene glycol or its monolaurate.

METHOD AND APPARATUS FOR THE PREPARATION OF COTTON WOOL BALLS. W. A. Kistler, Jr. (to Kistler & Co.). BP 829 582, Mar. 2, 1960. Through BCIRA 40: 1670 (1960). (2886)

A cotton web coming directly from a needled cylinder is divided into strips and fed as such to a device that tears off a given length at regular intervals and deposits the pad on an endless band traveling in a tapered channel provided with bent guide pins, whereby the pad is compressed and rolled into a ball.

CRIMPING APPARATUS. W. Stanley (to Imp. Chem. Inds. Ltd). BP 829 693, Mar. 2, 1960. Through BCIRA 40: 1676 (1960). (2887)

The apparatus works on the principle of the partially meshing pair of gear wheels but each wheel is made up of a number of blades projecting radially from a core the periphery of which is the frustrum of a right circular cone, so that, by moving the blades up or down the slope the overall diameter of the wheel may be changed and, therefore, the degree of crimp.

MANUFACTURE OF CARD FLEECES, SLIVER, OR YARN FROM MIXTURES OF MANMADE FIBERS. NV Onderzoekingsinst. Research. BP 828 967, Feb. 24, 1960. Through BCIRA 40: 1669 (1960). (2888)

Blending of manmade fibers is facilitated by treating the components with different finishing agents so that they differ in their static coefficients of friction.

Opening, picking, fiber preparation B1

APPARATUS FOR OPENING AND MIXING FIBERS. W. A. Hunter and F. Singleton (to T. M. M. (Research) Ltd). BP 828 455, Feb. 17, 1960. Summary in BCIRA 40: 1498 (1960). (2889)

Carding and combing B2

CLOTHING FOR CARDING MACHINE CLEARER AND WORKER ROLLERS. W. A. Goodwin. BP 828 287, Feb. 17, 1960. Through BCIRA 40: 1499 (1960). (2890)

The worker rollers are clothed in the usual manner, and the teeth are then clipped away close to the foundation at each end for a width of 7/8 in.; the clipped ends are covered with leather or metal strips to make the foundation smooth. The clearers are fitted at each end with a metal band 3/4 in. wide and 7/16 in. deep, and the space between the bands is filled with card fillet standing very slightly higher than the bands.

SLIVER COILER FOR USE WITH EITHER RIGHT OR LEFT HAND CARDS. C. W. Walter and A. D. Layson (to So. States Equip. Corp.). USP 2 933 776, Apr. 26, 1960. (2891)

PNEUMATIC DOFFER AND CLEANER FOR CARDING MACHINE. J. F. Lehman. USP 2 935 766, May 10, 1960. (2892)

COILER CAN EXCHANGE APPARATUS. W. Clementsen (Germany). USP 2 935 826, May 10, 1960. (2893)

Apparatus for automatically doffing and replacing coiler cans without moving the filler can or the can turntable.

ROLLER CARD. R. Taine and J. Pelissier (France). USP 2 936 495, May 17, 1960. (2894)

Better divided and parallelized products are obtained by interposing between two consecutive rollers (1) a slowly rotating worker associated with a stripper which transfers to the second carding roll all the fibrous material remaining on the worker after each rotation and (2) a stripping roller for transferring to the second carding roll the fibrous material remaining on the first carding roll after each rotation.

SLIVER COILER. C. W. Walter (to So. States Equip. Corp.). USP 2 936 496, May 17, 1960. (2895)

The coiler is provided with a platform arranged to receive and position large cans mounted on rollers as well as cans of the conventional type.

CARD CLOTHING. J. D. Hollingsworth. USP 2 937 412, May 24, 1960. (2896)

For both flexible and metallic clothing the side of the tooth below the tip is roughened to present an abrasive surface.

CARDING TOOTH CONSTRUCTION. J. D. Hollingsworth. USP 2 937 413, May 24, 1960. (2897)

Carding tooth construction which provides the advantages of a tooth with a forward leaning edge and one with a backward leaning edge without the disadvantages of either of these forms.

Drawing and roving B3

CARRIER ARM FOR TOP DRAFTING ROLLS. SKF Kugellagerfabriken GmbH. BP 829 396, Mar. 2, 1960. Through BCIRA 40: 1672 (1960). (2898)

Carrier arm for twin top drafting rolls comprises two detachable parts arranged one behind the other longitudinally; one part is pivoted on the support bracket to which it can be locked in position, and the other part, which carries all the top rolls and their weighting devices, comprises a section that reaches over the drafting field and can be swung laterally about an axis that stands up from the drafting field.

DRAFTING ROLL COUPLING. W. Naegeli (to J. J. Rieter & Co. Ltd). USP 2 935 767, May 10, 1960. (2899)

Spinning, winding, twisting B4

FOUR-FOLD PREVENTOR FOR YARN DOUBLING FRAMES. A. Wilcock and R. Jeffrey (to Fine Spinners & Doublers Ltd). BP 827 787, Feb. 10, 1960. Through BCIRA 40: 1506 (1960). (2900)

The device comprises a slotted plate located between the delivery rollers and the guide that leads the yarn to the traveler. The lower end of the edges of the vertical slot terminates in slits into which a broken end will be drawn and severed before it can attach itself to an adjacent end.

SPEED CONTROL APPARATUS FOR TWISTING MACHINES. H. E. Lloyd (to Duplan Corp.). USP 2 933 881, Apr. 26, 1960. (2901)

Means for controlling the rate of speed of the yarn takeup, thus controlling the twist applied to the yarn.

SPINNING RING CLEANING MEANS. A. J. Wayson (to Merriman Bros. Inc.). USP 2 936 565, May 17, 1960. (2902)

The ring holder or ring supporting flange is provided with a large number of holes or slots through which an air blast may be directed downward to clean the ring.

SUPPORT FOR PAIRS OF CONDENSING FUNNELS IN DRAFTING ARRANGEMENTS OF TEXTILE SPINNING MACHINES. J. J. Rieter et Cie AG. BP 828 140, Feb. 17, 1960. Through BCIRA 40: 1504 (1960). (2903)

The two funnels are carried at the ends of rigid rods the other ends of which are formed into ring-eyes, the ring of one rod surrounding the other rod. The rods are held in a slot in a central spacing element so that one funnel comes to the right and the other to the left of this element. Each funnel may be adjusted laterally for distance.

TENSIONING MEANS FOR SPINDLE BELT DRIVE. Württembergische Spindelfabrik GmbH. BP 828 504, Feb. 17, 1960. Through BCIRA 40: 1505 (1960). (2904)

The tensioning member for the belts that drive spindles is a pulley carried by a lever operated by fluid pressure exerted in a flexible hose within a conduit to which the lever is pivoted.

SPINNING APPARATUS. J. Meimberg (Germany). BP 828 804, Feb. 24, 1960. Through BCIRA 40: 1671 (1960). (2905)

Fibers are fed continuously to a rotary combing device and, when formed into a web, are continuously withdrawn at an angle to the plane of rotation of the comber and formed into a yarn.

CONTROL APPARATUS FOR RING SPINNING FRAME DRIVES. E. H. Binns and R. N. Petrie (to English Elec. Co. Ltd). BP 829 551, Mar. 2, 1960. Through BCIRA 40: 1673 (1960). (2906)

To change the speed from low to high, and back again if desired, at various stages in the spinning cycle, a screwed bush mounted on a threaded spindle is used to operate the switches and is driven by means of a flexible cable from the ratchet wheel shaft.

FALSE TWIST APPARATUS. R. G. C. Arridge, G. A. Clough, and M. W. Pell (to Brit. Nylon Spinners Ltd). BP 829 585, Mar. 2, 1960. Through BCIRA 40: 1674 (1960). (2907)

In apparatus for uptwisting multifilament yarn to a low degree of twist an annular friction surface is provided to impart false twist to the lengths of yarn in the ballooning phase between the supply package and the guide to the takeup package.

SPINNING RING LUBRICATION. A. J. Wayson and A. G. Bucchianeri (to Merriman Bros. Inc.). USP 2 936 568, May 17, 1960. (2908)

Vertical type spinning ring made of powdered metal is cut away on its outer surface in such a way as to provide a suitable oil channel and a recess to receive the flange of a surrounding ring holder.

TOP DRAFTING ROLLS FOR SPINNING FRAMES. L. M. Cotchett (to Machinecraft, Inc.). USP 2 937 414, May 24, 1960. (2909)

Center guided top rolls, mounted without the use of cap bars, have improved bearings which include lint and dust seals in the form of nylon flanges which are mounted in a fixed relation on the guiding sleeve in which the boss axle rotates.

Yarns B5

PRODUCTION OF MOCK BOUCLE YARNS. L. Neale and L. Rakowski (to Courtaulds Ltd). BP 828 641, Feb. 24, 1960. Through BCIRA 40: 1675 (1960). (2910)

The method of producing a bulked yarn by means of a turbulent gas stream is used for making mock bouclé yarn. At least two bundles of continuous filaments are fed into the turbulent zone, at two different speeds, and the resultant, single assembly is twisted as it is withdrawn. The extent of overfeeding of the fast bundle, in terms of speed, is at least 75% above the speed of the rest.

APPARATUS FOR THE PRODUCTION OF FILAMENTS OF UNEVEN DENIER HAVING PRONOUNCED SLUBS. J. H. McNeill and A. W. Keight (to Celanese Corp.). USP 2 932 850, Apr. 19, 1960. (2911)

YARN PACKAGING APPARATUS. H. Buddecke (Germany). USP 2 936 508, May 17, 1960. (2912)

Yarn for subsequent treatment by dyeing, bleaching, steaming, or impregnation is deposited in the form of oblong, helicoidally shaped coils overlapping each other and surrounded by a permeable prismatic or cylindrical casing.

TWISTING AND CRIMPING OF FILAMENTS. J. P. Russell, E. Stutchfield, J. R. Myers, and D. F. Arthur (to Brit. Nylon Spinners Ltd). USP 2 936 567, May 17, 1960. (2913)

The invention relates to a false-twist device that can impart a number of turns to the filament yarn for each turn of the rotating tube. It is further characterized by having the bore (or at least an end portion) lined with a nonabrasive material of high coefficient of friction against the yarn, e.g. a bushing of natural rubber filled with carbon black.

FABRIC PRODUCTION C

BRAIDING MACHINES. A. G. Herzog. BP 827 794, Feb. 10, 1960. Through BCIRA 40: 1527 (1960). (2914)

Bobbin carrier for a braiding machine is supported in a molded plastic body in which spring guide tubes are embedded. Soldering of all the tubes is thus avoided, it being necessary only to solder the first tube to the ring rail. Preferably, this rail is also riveted to the base of the plastic body.

Warping, slashing, yarn preparation C1

THREAD TENSIONERS. D. W. Smith and G. A. White (to Brit. Nylon Spinners Ltd). BP 828 086, Feb. 17, 1960. Through BCIRA 40: 1518 (1960). (2915)

Vibrations in a thread tensioner of the gate type are checked by using as loading force the resultant of two forces one at least of which is provided by a rubbery material. For example, the usual spring is replaced by a stronger spring checked by a rubber band.

WARPING MACHINE LEASE ROD FOR ORIENTING WARP THREADS. H. Hirschburger (to Zellweger AG). USP 2 935 780, May 10, 1960. (2916)

AUTOMATIC PIRN WINDERS. J. R. Grady (to Muschamp Textile Machy. Ltd). BP 828 335, Feb. 17, 1960. Through BCIRA 40: 1517 (1960). (2917)

To collect and stack pirns coming from an automatic winder without touching the yarn, a cradle and means for locating the pirn ends are used to receive the pirn and convey it to an empty station on a rack. The delivery of the pirn operates the stop-motion of the winder.

ELECTRONIC SLUB INDICATOR. Phrix Werke AG. BP 829 155, Feb. 24, 1960. Through BCIRA 40: 1683 (1960). (2918)

A barrier-layer photocell is used to sense a slub in a running yarn. The impulse is fed into an extension circuit for operating counting or cutting mechanism.

YARN SECURING DEVICE FOR SPOOL WINDING. W. Reiners and S. Fürst (Germany). USP 2 936 130, May 10, 1960. (2919)

Gripper device for seizing a yarn end from a supply cop and for positioning and tying it to the spool onto which it is to be rewound.

WARP THREAD GUIDING MEANS FOR WARPING MACHINES. A. W. H. Porter (to F. N. F. Machy. Mfg. Co. Ltd). USP 2 936 510, May 17, 1960. (2920)

YARN CLEARING APPARATUS. P. Wilson (to William Hollins & Co. Ltd). USP 2 936 511, May 17, 1960. (2921)

The invention relates to a photoelectric device for detecting thick places in a running yarn (e.g. slubs) and abnormally thin places, coupled with an audible or visual signal worked by an electromagnetic relay, which also operates a counting device and a cutter. The illustrations include a circuit diagram.

YARN LENGTH MEASURING APPARATUS FOR WINDING MACHINES. W. Gollos, W. Kotte, and H. Schippers (Germany). USP 2 936 525, May 17, 1960. (2922)

YARN TAIL GUIDE ASSEMBLY FOR DUAL YARN WINDING APPARATUS. C. L. Hausel (to Am. Viscose Corp.). USP 2 936 962, May 17, 1960. (2923)

Assembly for simultaneously forming tail sections on each of a pair of yarn collecting tubes in which the tail section is formed outside the main yarn body, and the yarn turns of the tail are securely locked by successive yarn layers.

BOBBIN. D. K. Seaborn (to Deering Milliken Research Corp.). USP 2 936 965, May 17, 1960. (2924)

Standard cylindrical core dual flanged bobbins which may be quickly converted for use in a creeling operation directly after yarn winding and vice versa.

Weaving C2

FEED PAWLS FOR ROTARY BOBBIN MAGAZINES USED IN AUTOMATIC LOOMS. L. G. Urquhart (to H. F. Livermore Corp.). USP 2 936 003, May 10, 1960. (2925)

AXMINSTER LOOM. P. W. Robinson. BP 827 602, Feb. 10, 1960. Through BCIRA 40: 1522 (1960). (2926)

In a spool Axminster loom, grippers are used to catch the depending ends of the pile yarn from the spool, the required length of pile being severed simultaneously and turned around the weft as it is being inserted by needle mechanism.

LOOM REEDS. H. Spencer, A. Spencer, and J. Spencer (to Hartley Spencer Ltd). BP 827 932, Feb. 10, 1960. Through BCIRA 40: 1525 (1960). (2927)

The reed band is impregnated, not with pitch, but with a thermoplastic resin that is not brittle enough to chip, e.g. a mixture of polyvinyl acetate, natural resin, and dibutyl phthalate.

LOOM DOBBY. Fonderie Officine di Gorizia SA. BP 827 966, Feb. 10, 1960. Through BCIRA 40: 1523 (1960). (2928)

The dobby mechanism is disposed within the loom frame below the heddles and controls the heddles without pulleys, cables, and transmission shafts.

HARNESSES. Soc. des Mecaniques Verdol and J. Nicholas & Cie. BP 828 074, Feb. 17, 1960. Through BCIRA 40: 1524 (1960). (2929)

In means for connecting the lifting cords to the corresponding elements of the heddle system on a jacquard loom, the ends to be united are wrapped in a sheath of cellulose acetate yarn (with extra wrappings of nylon if desired), the sheath is wetted with a solvent (e.g. acetone) so that the acetate yarn softens, and the solvent is evaporated, leaving the ends stuck together.

LOOM TEMPLES. Sulzer Frères SA. BP 828 146, Feb. 17, 1960. Through BCIRA 40: 1526 (1960). (2930)

A set of ellipse discs with inclined spiked rings mounted on them are clamped together side by side on a common sleeve that fits over the temple shaft.

LOOM WARP TENSION DEVICE. Sulzer Frères SA. BP 828 559, Feb. 17, 1960. Through BCIRA 40: 1521 (1960). (2931)

The warp is tensioned by a beam mounted in levers pivoted about a fixed axis on the loom frame, and an adjustable stirrup brake is fitted between the beam and one of the levers.

INDIVIDUAL WARP TENSIONING DEVICES FOR LOOMS. Soc. d'Applications Générales d'Elec. et de Mecanique. BP 828 878, Feb. 24, 1960. Through BCIRA 40: 1688 (1960). (2932)

Pieces of springy wire or strip metal are anchored to a common fixture at one end and formed into an eye at the free end for the individual warp threads which, at the crossover position of the shed, are bent through an angle of at least 90° as they pass through the eyes. The tension increases progressively as the eyes are pulled towards the heddles. A reed extends from the anchoring fixture to a back stop; the tensioning elements pass through the reed, one for each inter-tooth or inter-blade gap.

TONGUE FOR SHUTTLE BOXES. Metapic SA. BP 829 316, Mar. 2, 1960. Through BCIRA 40: 1686 (1960). (2933)

The invention seeks to ensure correct guiding of a shuttle into its box by a particular disposition of the rocking tongue in relation to the smooth surfaces located at either side of the reed.

WARP LETOFF. Metapic SA. BP 829 317, Mar. 2, 1960. Through BCIRA 40: 1687 (1960). (2934)

Control mechanism for securing constant letoff of the warp as the beam diameter decreases is easily adjustable to provide a warp tension to suit the type of weft being woven.

AUTOMATIC WEFT BOBBIN CHANGING APPARATUS. G. Fischer AG. BP 829 453, Mar. 2, 1960. Through BCIRA 40: 1685 (1960). (2935)

The invention is concerned with looms in which two shuttles, one above the other, pick simultaneously in the same direction and is designed to prevent automatic weft changing from occurring in both shuttles at the same time.

AIR JET LOOM. R. Opletal and B. Dvoracek (to Vyzkumny Brno). USP 2 936 002, May 10, 1960. (2936)

Apparatus for stopping the supply of air to the actuating valve of the loom, if the loom stops operating with the valve in its open position.

HEDDLE FRAME WITH EXCHANGEABLE INTERMEDIATE STAY ROD. M. Graf (to Grob & Co. AG). USP 2 936 793, May 17, 1960. (2937)

PICKER STICK CHECK STRAPS. H. J. Shivell and W. F. Dow (to Slip-Not Belting Corp.). USP 2 936 794, May 17, 1960. (2938)

A leather strap is combined with a mounting which can yield by slipping on an anti-friction bearing. The loading of the bearing is adjustable to give a resistance to sliding which balances the resistance of the strap to flexing and pulling through its bracket.

WARP YARN STOP MOTION FOR CARPET LOOMS. H. A. Batty and J. J. Higgins (to James Lees & Sons Co.). USP 2 936 795, May 17, 1960. (2939)

Drop wire type of stop motion consisting of a series of slotted heddles located either between the reed and front harness or adjacent the back harness of the loom.

Knitting C3

TRIPLE PLATED HOSE. R. C. Elwell. USP 2 934 923, May 3, 1960. (2940)

Stretch sock composed of a base structure of stretch nylon and a face and lining of non-relaxing yarns knitted in a triple plated relation under tension so as to produce a spongy, bulky effect when the fabric is relaxed.

ELASTICIZED SHIRRED OR CORRUGATED KNIT FABRIC. C. G. Lewine. USP 2 936 603, May 17, 1960. (2941)

LUBRICANT FOR LACE MACHINERY. C. A. Mills (to W. J. & T. Lambert & Co. Ltd). BP 817 003, July 22, 1959. Through BCIRA 40: 1528 (1960). (2942)

The problem of removing stains from netting and lace when graphite is used to lubricate the machine is minimized by blending the graphite with an anionic surface-active agent and a little of a dust-inhibiting agent.

YARN CLAMPING AND SEVERING MEANS FOR STRAIGHT BAR KNITTING MACHINES. A. E. Reading, Jr. (to Textile Mach. Works). USP 2 934 922, May 3, 1960. (2943)

Magnetically operated means for clamping yarn ends extending from the yarn carriers and a heated wire for severing such yarns between the clamping means and fabric blanks following the introduction to and removal of the yarns from feeding action.

CIRCULAR KNITTING MACHINES FOR DOUBLE FACED TERRY FABRICS. M. Thibord and R. de Séréville (to Etab. de Séréville). USP 2 936 601, May 17, 1960. (2944)

FLAW DETECTOR FOR CIRCULAR KNITTING MACHINES. H. F. Blackburn and K. U. Hanback (to Flagg-Utica Corp.). USP 2 936 602, May 17, 1960. (2945)

Automatic means for stopping the motion of a circular knitting machine in response to dropped stitches, holes, rents, tears, or runs.

WARP JACQUARD KNITTING MACHINE. E. Elia and A. Bracco (Italy). USP 2 937 515, May 24, 1960. (2946)

The weft thread guides alternately perform a free vertical movement to form the ground fabric and a vertical movement controlled by the jacquard cards to form the pattern.

STEP-BY-STEP DRIVE FOR CIRCULAR KNITTING MACHINE. B. J. E. Lebocey (France). USP 2 938 155, May 24, 1960. (2947)

Fabrics C4

POLISHING CLOTH. F. B. Anthon. BP 825 695, Dec. 23, 1959. Through BCIRA 40: 1569 (1960). (2948)

Grit is deposited on a bonding material and then hot-calendered to a fabric. The pressure causes the orientation of the particles so that they are fixed with their points embedded in the bond and fabric and their flatter surfaces outermost. The cloth will polish without scratching.

NONWOVEN FABRICS. Carl Freudenberg KG. BP 828 214, Feb. 17, 1960. Through BCIRA 40: 1567 (1960). (2949)

A bonded fiber fabric is made by applying rubber latex as bonding agent to the fiber fleece.

APPARATUS FOR PRODUCING FIBROUS SHEETS BY AIR DEPOSITION. J. d'A. Clark (to Fibrofelt Corp.). USP 2 931 076, Apr. 5, 1960. (2950)

NONSLIP EIDERDOWNS AND CUSHIONS. D. R. Shaw and W. Williams (to Brit. Celanese Ltd). BP 827 965, Feb. 10, 1960. Through BCIRA 40: 1531 (1960). (2951)

Eiderdown quilts and cushions are prevented from slipping by backing them with a fabric woven from bulked yarns, particularly of cellulose triacetate, viscose, nylon, or Terylene.

SOLVENT AND HEAT RESISTANT BONDED NONWOVEN FABRICS. B. B. Kine and N. A. Matlin (to Rohm & Haas Co.). USP 2 931 749, Apr. 5, 1960. (2952)

MULTIPLE PATTERN PICKUP FOR PILE HEIGHT CONTROL. R. S. MacCaffray, Jr. (to C. H. Masland & Sons). USP 2 932 181, Apr. 12, 1960. (2953)

SATIN TERRY WEAVE FABRIC. S. Frauwirth (to Normandie Bedspread Co.). USP 2 932 327, Apr. 12, 1960. (2954)

SCULPTURED EFFECTS IN TUFTED CARPETS. H. F. Odenweller (to Mohasco Inds.). USP 2 932 339, Apr. 12, 1960. (2955)

Tufting machine attachment by means of which pile yarns may be fed selectively to their needles in such a manner that the rows of loops inserted by any needle may vary in color and height.

RESIN-GLASS FIBER LAMINATED PIPE. A. N. T. St. John and B. M. Walker (to Resistoflex Corp.). USP 2 932 597, Apr. 12, 1960. (2956)

Economical, chemically inert piping fabricated of a thermosetting resin-glass fiber laminate with an integral lining of a nonporous polytetrafluoroethylene resin.

IMPROVED BONDING OF GLASS FIBER-POLYESTER RESIN LAMINATES. J. E. Henning (to Bjorksten Research Labs.). USP 2 932 598, Apr. 12, 1960. (2957)

The glass fibers are treated with the water soluble salts of nickel and acrylic, methacrylic, or crotonic acids, triphenyl bismuth derivative, tetraphenyl tin, or zirconyl carbonate.

FELTED PRODUCTS CONTAINING BOTH GLASS FILAMENTS AND CELLULOSE FIBERS. D. M. Hawley and J. C. Williams (to Hawley Prods. Co.). USP 2 932 601, Apr. 12, 1960. (2958)

Felted products of improved wet and dry strength are prepared by mixing glass fibers coated with a Werner complex and polyvinyl acetate and cellulose fibers in water to form an aqueous slurry, adding polyester resin to the slurry, and thereafter felting the fibers from the slurry.

CUTTING DEVICE FOR PILE FABRICS. G. de Mestral (to Sines Sociedad Para Inversiones Extranjeras SA). USP 2 933 797, Apr. 26, 1960. (2959)

Device for cutting rows of loops to form hooks.

HEAT-RESISTANT RESINS FOR GLASS FIBER REINFORCED LAMINATES. G. Alexander (to Gen. Elec. Co.). USP 2 936 260, May 10, 1960. (2960)

METALIZED BANDAGING MATERIAL. H. Stowasser (to Lohmann KG). USP 2 934 066, Apr. 26, 1960. (2961)

Absorbent, felt-like fiber fleece with fine pores, the fiber surfaces of which are covered with a thin metal coating.

HIGH CAPILLARITY PAPERMAKERS' FELTS. T. Hindle and E. Race (England). USP 2 934 097, Apr. 26, 1960. (2962)

The weft is arranged in several layers and at least half the warp yarns are interwoven with both outer weft layers so as to appear on both the front and back of the felt, and the remaining warps are interwoven with the back weft layer.

COLLAGEN FIBER MASSES. J. H. Highberger and R. A. Whitmore (to United Shoe Machy. Corp.). USP 2 934 446 and 2 934 447, Apr. 26, 1960. (2963)

Method for arranging collagen fibers in a random three-dimensional network capable of conversion to a leatherlike material.

PILL COMB. M. S. Kanbar. USP 2 934 810, May 3, 1960. (2964)

Gauze or cotton mesh fabric impregnated with abrasive particles and coated with shellac to round off the particle edges is supported by a holder to form an arcuate comb for pill removal.

APPARATUS FOR PATTERNED TUFTED FABRICS. J. L. Card (to Cobble Bros. Machy. Co.). USP 2 935 037, May 3, 1960. (2965)

Means for making patterned loop fabric of high and low nap by shifting the yarn being fed to reciprocating needles from a yarn feed roll driven at one constant speed to another driven at a different constant speed.

ZIPPER TAPE WITH INTEGRAL BEADED EDGE. W. T. Carson. USP 2 935 095, May 3, 1960. (2966)

WOVEN TUBULAR FABRIC FOR FIRE HOSE. W. Cole. USP 2 935 096, May 3, 1960. (2967)

Single-ply fabric which achieves the results of a two-ply fabric is composed of a base of helically disposed weft yarns interwoven with warp yarns, and additional warp yarns interwoven with the weft at preselected positions to form one surface of the fabric.

MACHINE FOR CARVING DESIGNS IN PILE CARPETS. C. A. Bryant and O. C. Payne (to Cabin Crafts, Inc.). USP 2 935 778, May 10, 1960. (2968)

Machine for carving designs by manual manipulation of the rug so as to permit intricate and individual effects.

WILTON-TYPE CARPET. T. T. Janney (to James Lees & Sons Co.). USP 2 936 004, May 10, 1960. (2969)

Wilton-type carpets with superior wear and strength characteristics are constructed by a 2-shot weave in which the weft shots pass in pairs above and below the stuffer warps.

COMBINED KNITTING AND SEWING MACHINE. E. Jette (Canada). USP 2 935 862, May 10, 1960. (2970)

Machine for applying a strip of knitted fabric onto a base fabric by means of stitches passing exactly through the loops of the knitted fabric.

CHENILLE FABRIC WITH WARP KNIT BASE. C. R. Ibach, Jr. USP 2 936 513, May 17, 1960. (2971)

PAPERMAKERS' FELT. T. Hindle and E. Race (to Scapa Dryers Ltd). USP 2 936 796, May 17, 1960. (2972)

Multiple ply fabric consisting predominantly of a face layer of Dacron, an intermediate layer of asbestos, and a back layer of cotton.

FINISHING D

YARN SUPPORTING REEL FOR WET AND DRY PROCESSING. G. Tigges (Germany). USP 2 936 964, May 17, 1960. (2973)

Rigid, perforated, frustoconical reel which has an annular lap-supporting plate at its bottom and which permits several reels to be superimposed on each other in a telescopic relationship.

Chemical processes D1

PRODUCTION OF MODIFIED AMINOPLASTIC RESINS. Chemische Fabrik Pfersee GmbH. BP 827 469, Feb. 3, 1960. Through BCIRA 40: 1386 (1960). (2974)

The invention relates to thermosetting basic condensation products of melamine or dicyandiamide, paraformaldehyde, a higher fatty acid or a resin acid, and a hydroxyalkylamine (e.g. triethanolamine). Before hardening, the products are freely soluble in chlorinated solvents and give acidic aqueous emulsions with paraffin wax and the like. They are useful as finishing and proofing agents on textile fabrics. Examples relating to water-repellent finishes on cotton gabardine are given.

BRIGHTENING AGENTS FOR NATURAL AND POLYAMIDE FIBERS. Sandoz Ltd. BP 827 567, Feb. 10, 1960. Through BCIRA 40: 1554 (1960). (2975)

The agents are obtained by the action of cyanuric chloride on diamino-stilbenedisulfonic acids; they contain, therefore, two 1:3:5-triazinyl systems.

FORMATION OF ALDEHYDE RESINS. J. J. Ryan, P. J. Taylor, and F. H. Burkitt (to Tootal Broadhurst Lee Co. Ltd). BP 827 645, Feb. 10, 1960. Through BCIRA 40: 1563 (1960). (2976)

The invention relates to acid-reacting catalysts for the formation of amine/aldehyde resins in crease-resist and related resin finishes.

FLAME RETARDANT POLYESTER RESIN COMPOSITION CONTAINING HALOGEN AND PHOSPHORUS, AND LAMINATED ARTICLE USING SAID COMPOSITION AS A BINDER. P. Robitschek and C. T. Bean (to Hooker Chem. Corp.). USP 2 931 746, Apr. 5, 1960. (2977)

PROCESS FOR DELUSTERING TEXTILE MATERIALS. P. H. Haycock, J. J. Ryan, and M. Tuson (to Tootal Broadhurst Lee Co. Ltd). BP 827 646, Feb. 10, 1960. Summary in BCIRA 40: 1564 (1960). (2978)

COTTON CREASEPROOFING WITH UREA FORMALDEHYDE RESIN. F. C. Wood and R. E. Hunt (to Tootal Broadhurst Lee Co. Ltd). BP 827 647, Feb. 10, 1960. Through BCIRA 40: 1565 (1960). (2979)

If an amidic textile lubricant is also used, the fabric has satisfactory strength and the ratio of formaldehyde to urea may be raised, with advantage to the crease-resist effect, to 1.8 to 1.

ROTARY WASHING MACHINES. G. Dowell (to Cherry Tree Mach. Co. Ltd). BP 827 848, Feb. 10, 1960. Through BCIRA 40: 1598 (1960). (2980)

The rotation of the container for the goods (e.g. garments) causes a small pressure to build up in the stationary casing whereby the liquid is caused to circulate by gravity through an external system that includes a settling tank. The circulation is independent of the dip in the machine so long as this is sufficient for the liquid to reach the external system at some stage of the operation of the machine.

PROCESS FOR THE OPTICAL BRIGHTENING OF POLYESTER FIBERS. Ciba Ltd. BP 827 992, Feb. 10, 1960. Through BCIRA 40: 1555 (1960). (2981)

The agents have two benzoxazole or benzimidazole systems connected by an ethylene bridge and are devoid of groups that confer solubility in water. They are foularded on the fabric in an aqueous medium at about 60° C, and the fabric is dried and baked at 120-255° C.

BLEACHING PROCESS, USING AQUEOUS SOLUTIONS OF CHLORITES. Deutsche Gold & Silber Scheideanstalt. BP 828 049, Feb. 10, 1960. Through BCIRA 40: 1551 (1960). (2982)

To activate a chlorite solution without the production of harmful and unpleasant ClO_2, or reducing some of the chlorite, it is proposed to use chloral hydrate.

DIRECT COATING TRACING CLOTH. C. Dunbar and J. Lunt (to Winterbottom Book Cloth Co. Ltd). BP 828 195, Feb. 17, 1960. Through BCIRA 40: 1566 (1960). (2983)

A dimensionally-stable tracing cloth, capable of absorbing ink and photosensitive materials, is made by embedding a textile fabric in a sheet comprising a cured polyester containing a monomeric vinyl compound, e.g. N-vinyl-pyrrolidone or styrene.

IMPROVING THE CHARACTERISTICS OF BLENDED FABRICS. Raduner & Co. AG. BP 828 696, Feb. 24, 1960. Through BCIRA 40: 1706 (1960). (2984)

The invention relates to means for causing either component of a blended-fiber yarn to come to the surface as desired. The fabric made from the yarns is padded with an agent that causes shrinkage of the component that should accumulate inside, tension is applied to restore the original dimensions, and the agent is washed out. Preferably, a resin or other treatment to secure stable dimensions is then applied.

APPARATUS FOR TREATING A WEB OF TEXTILE MATERIAL. B. Kawaguchi. BP 828 236, Feb. 17, 1960. Through BCIRA 40: 1558 (1960). (2985)

The submerged rollers that guide the web through the liquid are mounted on hollow shafts that communicate with suction means for drawing liquid through the web.

OPTICAL WHITENING AGENTS. D. A. W. Adams and A. K. Sarkar (to Hickson & Welch Ltd). BP 828 329, Feb. 17, 1960. Through BCIRA 40: 1553 (1960). (2986)

The 24 claims relate to a series of triazolyl-stilbene derivatives characterized by the attachment of an indazole system to the triazole ring.

OPTICAL BRIGHTENING AGENTS FOR POLYESTER MATERIALS. Ciba Ltd. BP 828 545, Feb. 17, 1960. Through BCIRA 40: 1556 (1960). (2987)

Fluorescent materials of the type of α,β-di(5-methylbenzoxazolyl-2-)ethylene are claimed as brightening agents for Terylene fabrics.

BONDING, COATING, AND IMPREGNATING AGENTS FOR TERYLENE. A. R. Ford, J. R. A. Kennedy, N. Munro, and N. Standring (to Imp. Chem. Inds. Ltd). BP 828 922, Feb. 24, 1960. Through BCIRA 40: 1705 (1960). (2988)

Claims are made for other polyesters that soften in the range 140-230° C, e.g. poly-1:4-butanediol terephthalate. The examples include splicing Terylene spindle tape, making insulating and waterproofed fabric, and stiffening Terylene cord.

TEXTILE ORNAMENTATION. B. R. A. Wojtowicz (to Bradford Dyers' Assoc. Ltd). BP 828 947, Feb. 24, 1960. Through BCIRA 40: 1702 (1960). (2989)

Decorative effects are produced, particularly on blends of cellulose triacetate with cotton or viscose rayon, by applying a swelling agent for the acetate (e.g. diethylene glycol diacetate), washing out the swelling agent, embossing the desired pattern, and dyeing.

SHRINKPROOFING WOOL WITH POLYEPOXIDES, POLYAMIDES, AND AMMONIA. T. J. Coe (to U. S. Secy. Agri.). USP 2 933 366, Apr. 19, 1960. (2990)

Method of shrinkproofing wool without impairment of its normal properties by impregnation with a polyepoxide and a polyamide and curing with ammonia in the vapor phase.

FLAME RESISTANT CELLULOSIC TEXTILES. W. A. Reeves, G. L. Drake, Jr., and J. D. Guthrie (to U. S. Secy. Agri.). USP 2 933 367, Apr. 19, 1960. (2991)

Obtained by reacting chemically modified cellulose, e.g. phosphonomethyl or sulfoethyl cellulose, with aziridinyl phosphine oxide or sulfide.

METHOD FOR PERMANENT PLEATING OF WOOL. C. H. Binkley and C. E. Pardo, Jr. (to U. S. Secy. Agri.). USP 2 933 409, Apr. 19, 1960. (2992)

The wool textile is impregnated with a polyepoxide and a polyamide, arranged in the pattern desired, and heated to cure the resin on the fiber.

SIMULTANEOUS DRYCLEANING AND WATERPROOFING OF FABRICS. L. J. Novak (to Commonwealth Eng. Co.). USP 2 933 411, Apr. 19, 1960. (2993)

The fabrics are treated with a solution containing dry-cleaning solvents and saturated fatty acid esters of a dextran so that the drycleaned fabric carries a water repellent coating of the ester until the next drycleaning.

METAL COATING GLASS FILAMENTS. C. B. Budd and D. E. Weaver (to B. F. Goodrich Co.). USP 2 934 458, Apr. 26, 1960. (2994)

Molten metal is supplied to an orifice of capillary dimensions so that a minute bead of molten metal is formed through which the filament passes.

FABRIC LENGTH CONTROL DURING FINISHING. H. Kabelitz (to Firma Gebrüder Sucker GmbH). USP 2 935 311, May 3, 1960. (2995)

Apparatus for measuring and regulating the stretching and/or shrinking of textiles by indicating and controlling the speed ratio between two rotary elements.

APPARATUS FOR TREATMENT OF YARNS. F. W. J. Karrer (to Pluria AB). USP 2 936 212, May 10, 1960. (2996)

Means for circulating the liquid through the yarn by alternately increasing and decreasing the pressure on the liquid.

ANTISTATIC AGENT FOR SYNTHETIC FIBERS. G. Hennemann and A. G. Lutgerhorst (to Am. Enka Corp.). USP 2 936 249, May 10, 1960. (2997)

Polyacrylic acid is claimed.

HOSIERY BOARDING APPARATUS. T. P. Flanagan. USP 2 936 529, May 17, 1960. (2998)

The apparatus is applicable to preboarding as well as to final boarding.

INCREASING THE FLUFFINESS OF LAND FOWL FEATHERS. V. Z. Pasternak (to U.S. Secy. Army). USP 2 937 918, 2 937 919, and 2 937 920, May 24, 1960. (2999)

Land fowl feathers with increased fluffiness and filling power are produced by treatment with acrylonitrile (2 937 918), with 1,4-benzoquinone (2 937 919), or with N-methylolacrylamide (2 937 920).

Dyeing and printing D2

PRODUCTION OF AZO DYEINGS AND PRINTINGS ON CELLULOSE FIBERS. Cassella Farbwerke Mainkur AG. BP 827 570, Feb. 10, 1960. Through BCIRA 40: 1560 (1960). (3000)

The diazotizable components of a set of fast azo dyes contain the sulfofluoride group.

DYEING WOOL FIBERS BY MEANS OF INSECT QUINONES. R. K. Ladisch (to U.S. Secy. Army). USP 2 936 210, May 10, 1960. (3001)

SPECIMEN HOLDER FOR MAKING TEST DYEINGS. Ciba Ltd. BP 827 577, Feb. 10, 1960. Through BCIRA 40: 1559 (1960). (3002)

The container part has impermeable side walls but a perforated base and the specimen is held in it by means of a perforated cover that can be fixed at a suitable height.

PRINTING OF POLYESTER OR CELLULOSE TRIACETATE FIBERS. Farbwerke Hoechst AG. BP 827 731, Feb. 10, 1960. Through BCIRA 40: 1561 (1960). (3003)

The fabrics are printed with pastes of disperse dyes containing a polyhydric alcohol (glycol, glycerol) or ether or ester thereof, dried and heated at 140-220° C.

PRESSURE CONTROL MECHANISM FOR DOCTOR BLADES. R. Krawehl and W. Eifler (Germany). BP 828 516, Feb. 17, 1960. Through BCIRA 40: 1562 (1960). (3004)

The blade is held against the printing roller by a number of pressure members acting at points along the length of the blade. These members can slide lengthwise and protrude from a rubber tube filled to a controlled extent with compressed air that is the source of pressure common to all the members. The doctor blade may be reduced to very thin strip steel.

PRINTING POLYESTER FIBERS. Farbwerke Hoechst AG. BP 828 903, Feb. 24, 1960. Through BCIRA 40: 1703 (1960). (3005)

Polyesters of the Terylene type suffer heterogeneous hydrolysis without swelling when treated with caustic alkali (especially hot) containing as a promoter a strong organic base, e.g. a quaternary ammonium base or an alkyl-guanidine. Various effects are thus possible, especially by a printing technique, such as dulling and differential dyeing.

DYEING POLYESTER FIBERS. Farbwerke Hoechst AG. BP 828 924, Feb. 24, 1960. Through BCIRA 40: 1698 (1960). (3006)

Dispersion dyebaths for use with polyesters are stabilized by the addition of a surface active ester of phosphoric acid.

PRINTING WITH VAT AND SULFUR DYESTUFFS. Badische Anilin & Soda Fabrik AG. BP 829 177, Feb. 24, 1960. Through BCIRA 40: 1700 (1960). (3007)

In a 2-phase printing process an alkali salt of a hydroxyalkylsulfinic acid is used as reducing agent.

PRINTING PASTES. F. R. Alsberg and A. H. Wyld (to Imp. Chem. Inds. Ltd). BP 829 443, Mar. 2, 1960. Through BCIRA 40: 1699 (1960). (3008)

The invention relates to the use of amino acids especially sarcosine, and other amino compounds in printing pastes to obtain pure white resists under reactive dyes.

SPUN DYED VISCOSE YARN. T. E. Patton (to Am. Enka Corp.). USP 2 934 448, Apr. 26, 1960. (3009)

System for obtaining homogeneous dye distribution in spin dyeing.

PRODUCTION OF NEUTRALLY DEVELOPABLE TEXTILE PRINTS. Ciba Ltd. BP 829 570, Mar. 2, 1960. Through BCIRA 40: 1701 (1960). (3010)

The use of salts of halogeno-fatty acids in the development of prints in neutral steam is unnecessary when the paste contains, besides a coupling component as used for ice colors, a labile diazoamino compound of the formula given.

PRINTING PASTE. E. Moser and A. Bolleter (to Ciba Ltd). USP 2 931 699, Apr. 5, 1960. (3011)

The use of 4-arylazo-1-amino-7-hydroxynaphthalene as a coupling agent for a stabilized diazoamino compound under neutral steaming conditions is claimed.

COLORED GLASS FIBERS. D. Labino (to L. O. F. Glass Fibers Co.). USP 2 932 587, Apr. 12, 1960. (3012)

Blue-green colored glass fibers are obtained by spraying the fibers with an aqueous solution containing a phenol formaldehyde resin, Prussian blue, and oxalic resin, and heating to remove the water and cure the resin to effect binding.

DYEING KERATIN FIBERS BY CHEMICAL MODIFICATION. J. E. Moore (to U. S. Secy. Agri.). USP 2 933 365, Apr. 19, 1960. (3013)

Wool and other keratin fibers, e.g. horsehair, fur, feathers, etc., are dyed by replacing the normal disulfide linkages in the fibers by novel linkages derived from chromophoric unsaturated amides, imides, and related compounds.

PRINTING PASTES. H. A. Toulmin, Jr. (to Commonwealth Eng. Co.). USP 2 933 403, Apr. 19, 1960. (3014)

Printing pastes with a predetermined consistency which does not depend on cooking are prepared using short, tough, and crumbly gum dextrans prepared by the action of certain strains of Leuconostoc mesenteroides on sucrose as a thickening and binding agent.

FIXING PIGMENTS ON FIBROUS MATERIALS. H. Haakh and A. Rückert (to Farbwerke Hoechst AG). USP 2 933 416, Apr. 19, 1960. (3015)

The fixative comprises an alkali-soluble resinous condensate containing free carboxylic acid groups (obtained by the interaction of a polyhydric alcohol with a polycarboxylic acid) and a polyfunctional compound containing ethyleneimine or alkylene oxide radicals.

DYEING POLYESTER FIBERS. H. P. Landerl (to E. I. du Pont de Nemours & Co.). USP 2 934 397, Apr. 26, 1960. (3016)

Dimethyl terephthalate is claimed as a carrier for disperse dyes.

ACRYLIC FIBER DYEING. J. Khachoyan and J.-P. Niederhauser (to Compagnie Francaise des Matieres Colorantes). USP 2 937 067, May 17, 1960. (3017)

The use of hydroxylamine is claimed to facilitate the dyeing of acrylic fibers in strong shades by means of a large number of different dye classes.

SPUN DYED VISCOSE FIBERS. F. B. Jones (to Am. Enka Corp.). USP 2 934 449, Apr. 26, 1960. (3018)

Method for producing lustrous spun dyed viscose filaments that do not exhibit dichroism.

Mechanical processes D3

APPARATUS FOR MEASUREMENT AND CONTROL OF FABRIC TENSION. W. F. Huck (to Huck Co.). USP 2 931 962, Apr. 5, 1960. (3019)

Electrical device for measuring, indicating, adjusting, and automatically controlling the tension in a moving fabric web.

METAL PIN RACK FOR FABRIC STRETCHING MACHINES. G. Möhring (to Famatex GmbH). USP 2 935 779, May 10, 1960. (3020)

REMOVABLE ROLL FOR CALENDERS. K. Zimmerli (to B. F. Perkins & Son, Inc.). USP 2 936 699, May 17, 1960. (3021)

CREELS FOR HEAVY FABRICS. J. Kreuthmeier. USP 2 936 882, May 17, 1960. (3022)

The detachment of the fabric from the creel is greatly simplified by the use of hooks whose ends are formed at right angles, so that the planes of the hooks are parallel. This permits the hooks to be disengaged from the supporting plates by a simple pivotal movement.

Drying, setting, conditioning D4

PERFORATED DRUM DRYER FOR LOOSE TEXTILE FIBERS. S. Breed (to Taylor, Wordsworth & Co. Ltd). BP 828 008, Feb. 10, 1960. Summary in BCIRA 40: 1570 (1960). (3023)

TESTING AND MEASUREMENT E

Yarns E2

APPARATUS FOR COUNTING FILAMENTS IN MULTIFILAMENT YARNS. W. J. Morris and J. K. Slack (to Brit. Rayon Research Assoc.). BP 829 330, Mar. 2, 1960. Through BCIRA 40: 1727 (1960). (3024)

The yarn is held under constant strain (to give a constant tension per filament) and progressively cut. The impulses occurring as one filament after another is severed are fed to an electromechanical transducer and converted into electric impulses which are fed to a counter.

Fabrics E3

CLOTH INSPECTION FRAME. A. L. Butler, Jr. and J. D. Chandler (to Arista Mills Co.). USP 2 936 506, May 17, 1960. (3025)